CANADIAN ECOTOXICITY WORKSHOP
OTTAWA 2023

2 - 5 OCT 2023

49th Annual Canadian Ecotoxicity Workshop

INSPIRING SCIENCE IN THE CAPITAL

INVESTIGATION | INTEGRATION | IMPLEMENTATION

Photos in this document provided by:

Shaw Centre
Destination Ontario
Ottawa Tourism

Visit the new CEW website for the lastest conference info!
ecotoxcan.ca

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GENERAL INFORMATION

PROGRAM

PLATINUM

syngenta®

NAUTILUS ENVIRONMENTAL

Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

GOLD

ADEPT ENVIRONMENTAL SCIENCES LTD

AZIMUTH

BOREALIS ENVIRONMENTAL CONSULTING INC

DILLON CONSULTING

Equilibrium Environmental Inc.
for a balanced environment...

Hatfield

LORAX ENVIRONMENTAL

Stantec

TrichAnalytics LABORATORY

Trinity Consultants
Minnow Aquatic Environmental Services

SILVER

HALLTECH Aquatic Research Inc.

KILGOUR & Associates

IISD Experimental Lakes Area

WSP

BRONZE

CanNorth

ecoreg SOLUTIONS

Hutchinson Environmental Sciences Ltd.

The Mining Association of Canada | L'association minière du Canada

University of Saskatchewan Toxicology Centre

EXHIBITORS

HALLTECH Aquatic Research Inc.

Be sure to visit our Exhibitors on Tuesday and Wednesday. Find them in the **Rideau Canal Atrium!**

ebpi environmental bio-detection products inc.

HOSKIN SCIENTIFIC

SRC Environmental Analytical Laboratories

ORGANIZING COMMITTEE

LEANA
VAN DER VLIET

Environment & Climate Change Canada
Co-Chair

REBECCA
DALTON

Environment & Climate Change Canada
Co-Chair

SARAH
MARTEINSON

Fisheries and Oceans Canada
Scientific Committee

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University of Manitoba
Graduate Student Advisor

VERENA
SESIN

Canadian Nuclear Safety Commission
Short Courses

CAMELIA
TAVAKOLI

University of Waterloo
Sponsorship

ÈVE
GILROY

Environment & Climate Change Canada
Equity, Diversity, and Inclusion Champion

REYD
SMITH

Carleton University
Graduate Student Advisor

MESSAGE FROM THE CO-CHAIRS

Welcome to CEW 2023 in the nation's capital! Ottawa is built on the traditional and unceded territory of the Anishinaabe Algonquin Nation. CEW received a record-setting number of abstracts, and we are expecting to welcome a record-setting number of attendees. There has never been a better time to reconnect with existing colleagues and also to grow your professional network. CEW will deliver on all the great science that CEW attendees have come to expect, and this year, the organizing committee has incorporated a focus on Indigenous programming. Reflecting on the National Day for Truth and Reconciliation, we have shifted the usual dates of the conference, and are offering two no-cost workshops on Monday October 2nd. Conference organizers also made the conscious commitment to weave equity, diversity and inclusion into many parts of our program, including student activities.

Our scientific program is diverse, and includes many of the mainstays of the CEW schedule, like metals and mining, impacts from agricultural activities, wastewater and 'omics. Our scientific program committee also worked hard to enrich the CEW program with emerging and cross-sectional topics, such as plastic pollution, impacts of tire wear particles and contaminant effects in a climate-changed world. All the planning effort of our scientific program committee in the earlier part of the year was echoed and amplified by the session co-chairs, who worked tirelessly to solicit presentations, and curate and review all submissions. Lastly, through the phenomenal response to our diverse short course offerings, CEW attendees signaled to us that they are life-long learners – and our enterprising short course instructors are ready to deliver engaging classroom-style learning events.

We have heard from so many in the CEW family just how valuable the student program is, and this year, you can expect an incredible variety of activities, each day of the conference. Get ready to be inspired, whether you are a student, mid-career or a seasoned professional in the field. See the pages dedicated to our student program later in the program book.

How are we able to offer all this – including lunch and refreshments – for such a reasonable registration cost? Lean in and listen, we will tell you what goes on behind the curtain. CEW relies on the generous support of our sponsors and exhibitors. We are grateful to have a solid base of financial support from our sponsors, including the many who are sponsors for CEW every year. CEW is a non-profit organization run nearly exclusively by volunteers. Conference co-chairs, board members, organizing committee members, scientific session co-chairs, our entire student program – we all volunteer our professional time to make it happen. And lastly, as mundane as it may sound, budgeting plays a big role too. The co-chairs (that's us!) think carefully about every expenditure to deliver the high-quality experience CEW attendees want at a reasonable price.

Our theme this year is **"Inspiring Science in the Capital: Investigation, Integration, and Implementation"**. We invite all attendees to reflect on how the programs and projects we are involved in intersect with our theme. And get ready to be inspired!

Rebecca Dalton
Stacey Robinson
Leana Van der Vliet

CEW 2023 Co-Chairs

Explore the City of Ottawa

ottawatourism.ca

Downtown Ottawa has so much to offer CEW attendees! Here are our top picks, all within walking distance of the Shaw Centre. Be sure to check out ottawatourism.ca for more ideas.

"We have great green spaces right in the downtown core, and spending time outdoors is so re-energizing. There's a path right outside the front doors of the Shaw Centre, where you can walk along the historic Rideau Canal. Major's Hill Park, with access points off Mackenzie Ave., has lovely winding paths and great river views."

- Stacey

"Ottawa is home to impressive museums, and many are a short walk or ride away from the Shaw Centre. The Museum of Nature is my personal favourite, housed in a spectacular historic building with four floors of exhibits. Frugal travellers take note: on Thursday evenings from 5 p.m. to closing, admission is free to many popular museums in or around the downtown core (Museum of Nature, Museum of History, War Museum) as well as the National Art Gallery. It's a popular time to visit, so consider seeing if you need to reserve tickets in advance."

– Rebecca

"I can't claimed to have done this, but someday, I'll work up the courage to try Canada's only inter-provincial zipline. You start your adventure on the Quebec side, and travel high above the Ottawa River to the Ontario side. Open Friday to Sunday during CEW, Interzip (https://www.interzip.ca/)."

- Leana

"A flat donut, without a hole in the middle? Yes—it's called the Beaver Tail! A specialty treat, well-known to Ottawans and now known to visitors like you. Look for the iconic food booth in the Byward market. My favourite is the Classic."

– Stacey

"Ottawa entrepreneurs responded with an enthusiastic YES! to the trend in craft beers. You can find a small variety at the smaller LCBO in the Rideau Centre, or for a larger selection, take the few extra steps to the flagship store further down Rideau Street. There are a few brew pubs in the market too."

- Rebecca

"October is still patio season for Canadians, am I right? There are a number of spots for an elevated patio experience, and my top pick in downtown is the stylish Copper Spirits and Sights, on the roof top of the Andaz hotel. You'll be treated to a great view of the market and the Parliament buildings. They accept reservations for the early evening."

- Leana

WELCOME TO OTTAWA

LAND ACKNOWLEDGMENT

our personal reflection

O Canada, our home on Native land

In our land acknowledgement, we want to recognize the work we have ahead of us: the work to face uncomfortable truths about our history, the work to lean into unfamiliar and difficult conversations, the work to seek out and then heal fractured relationships with First Nations, Inuit and Métis. Acknowledging the land we are on also means acknowledging how we use it. We earn a living, attend school, raise our families, spend our money, and participate in conferences like CEW, and those daily activities are infused with our personal and professional values. We know those values can be enriched through truth and reconciliation.

Settlers, immigrants, First Nations, Inuit, Métis. Members of the CEW family. Our identities are woven together with pride, a sense of belonging, and a passion for understanding and protecting the world around us. They also come with different privileges, whether they are privileges which are openly recognized or hidden. There is lots of space to reflect on these identities and privileges and commit to promoting equity, diversity and inclusion.

Ottawa was not founded on vacant and uninhabited land. It was built on unceded territory that was and remains home to the Anishinaabe Algonquin Nation. Their culture and presence have nurtured and continue to nurture this Land and the Kichi Zībī (Ottawa River). We recognize all Indigenous people in the region, from all Nations across Canada, who have also made Ottawa (from the Algonquin word ‘adawe’, meaning ‘to trade’) their home. A New Dawn – Oshki Pìdàban - is before us, and we commit to actively contributing to reconciliation efforts. We invite all in the CEW family, coming from different lands and coming with different identities, to reflect on their own version of a land acknowledgement.

Rebecca Dalton, Stacey Robinson, and Leana Van der Vliet
2023 CEW Co-Chairs

This land acknowledgement was inspired by the video “Land Acknowledgements and Why They Matter”, created by Ryan Matheson, at the University of Guelph, itself situated in The Dish with One Spoon territory. It was also inspired by the grassroot efforts of Albert Dumont “South Wind”, Poet, Storyteller, Speaker, and Algonquin Traditional Teacher. With thanks to Canadian R&B legend Jully Black for the title, “O Canada, Our home on Native land.”

ESSENTIAL INFORMATION

COVID Considerations

Masks are not required, however CEW maintains a mask-friendly atmosphere. CEW is hosted in accordance with all current public health orders and instructions, under the jurisdiction of Ottawa Public Health. There are no orders or instructions for conference-type gatherings at time of writing (September 2023).

Important Info

Please turn off or mute your cell phones during the plenary and all scientific sessions.
Please wear your name badge throughout the conference.
Smoking and vaping are prohibited in all indoor spaces.

CEW is a memorable event, and we are planning on having a photographer capture some great CEW moments. As a default, we assume that you consent to having your photo taken and used for CEW purposes (like our upcoming 50th anniversary year, or on our website). If you do not consent to having your photo, please inform the photographer directly and they will be sure not to take your photo.

REGISTRATION DESK LOCATED IN
RIDEAU CANAL ATRIUM

ACCESSING WI-FI

NETWORK | **CEW2023**
PASSWORD | **Ottawa23**

Visit our website for directions, parking info, and more

ecotoxcan.ca/general-workshop-info

Presenting a Platform?

Presenters will be required to save their PowerPoint presentations on the computer in their presenting room at least 20 min before their session begins. If your session is on Tuesday morning, please arrive early to your room to upload your presentation, otherwise, for Wednesday and Thursday morning presentations, please upload your presentation the day before. Upon arrival at your session, please identify yourself to the Session Chair(s) before it begins.

Presenting a Poster?

Each poster has a unique number in the program book that corresponds to a poster board in the poster area (Rideau Canal Atrium) and a specific day (Tuesday or Wednesday). All posters should be set up between 07:30 and 08:30 on your assigned day and taken down by 20:00 that day. Please be present at your posters during refreshment breaks and the poster socials on Tuesday and/or Wednesday. This is especially important for students being judged as part of the poster competitions.

Assistance & Questions

Find an Organizing Committee member with any questions or visit the Registration Desk, open at the following times:

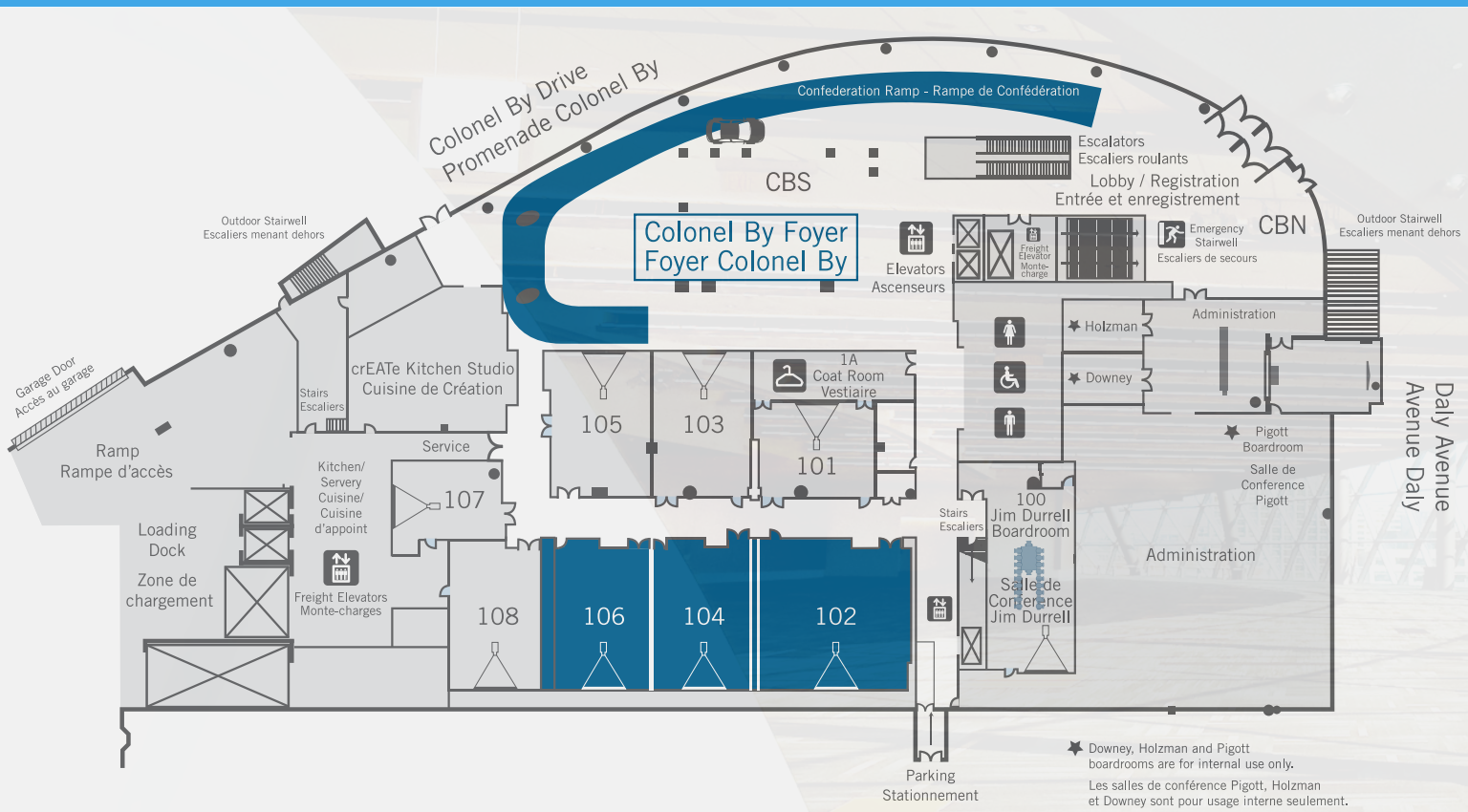
Monday, October 2: 08:00 - 17:30
Tuesday, October 3: 07:30 - 19:00
Wednesday, October 4: 07:30 - 19:00
Thursday, October 5: 08:30 - 12:00

GETTING AROUND

Floor plans created by and adapted from the Shaw Centre.
View online floor plans at the link below.

Short Courses & Breaks | October 2

LEVEL 1



Navigate the Shaw Centre

shaw-centre.com/attendees

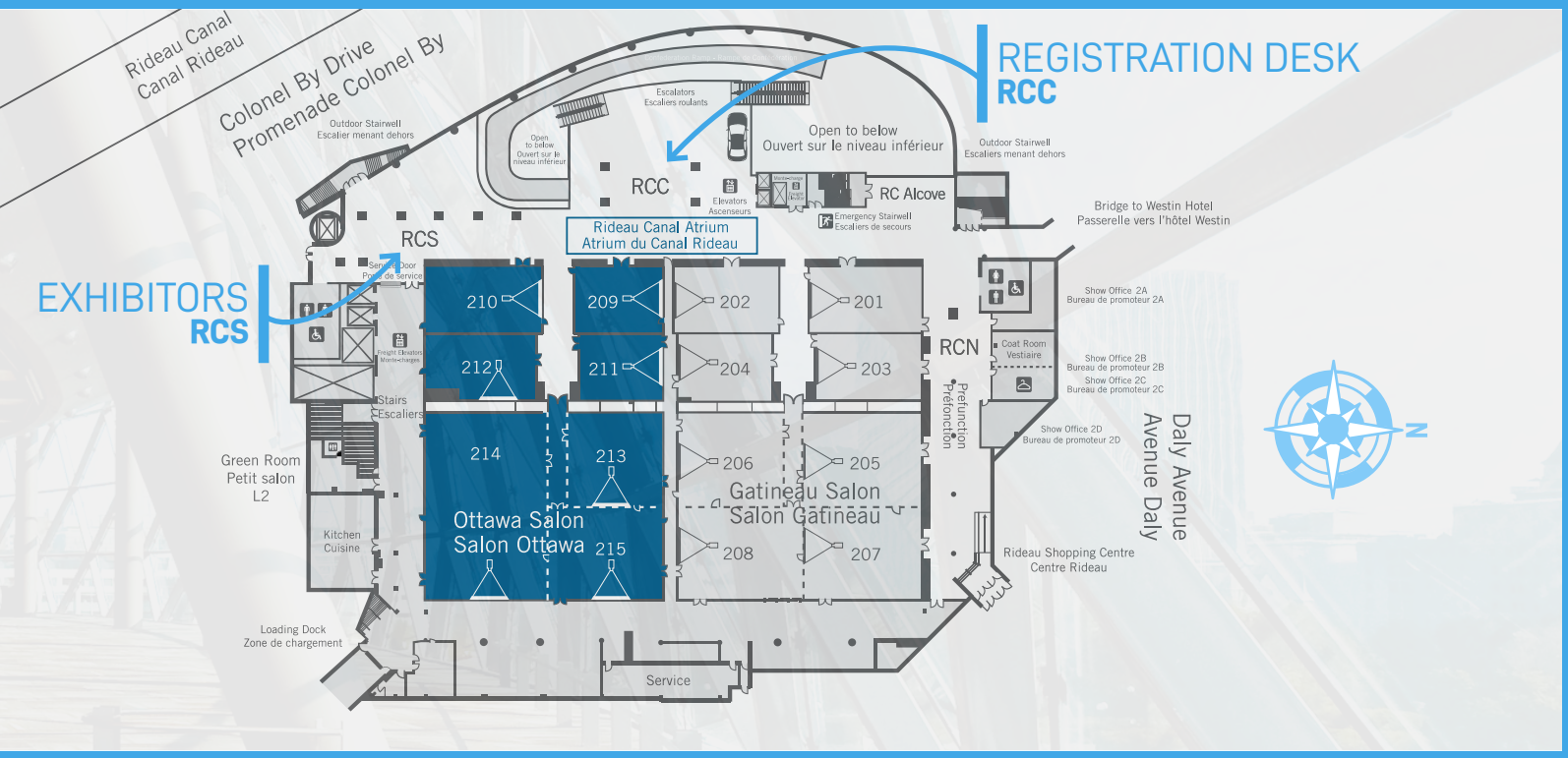
Shaw Centre

The Shaw Centre is next to the Rideau Canal

We invite attendees to enjoy a walk along the multi-use pathway just outside the doors of the Shaw Centre – a great way to squeeze in a movement break and benefit from the mental refresh that outdoor time gives us.

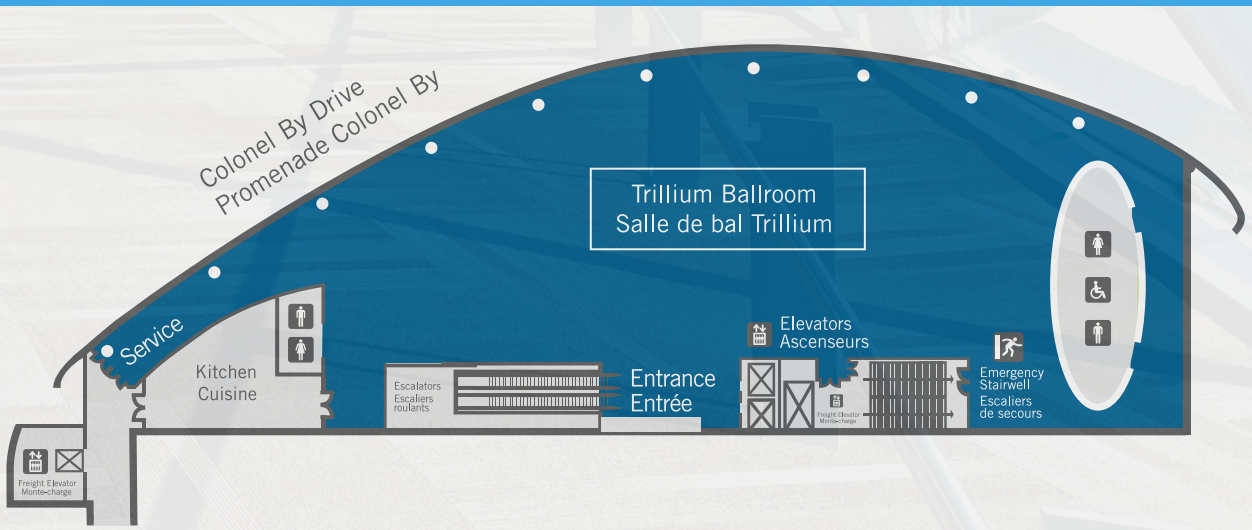
Plenary, Sessions & Posters | October 3-5

LEVEL 2



Lunches & Banquet | October 3-5

LEVEL 4



STUDENT PROGRAM

Greetings students,

On behalf of the CEW Student Program Subcommittee, we are happy to welcome all students to the 49th annual Canadian Ecotoxicity Workshop, and are looking forward to seeing new and familiar faces in Ottawa for CEW 2023! If this is your first time attending CEW, we encourage you (and all our members) to participate in all of the great activities offered this year, and to ask returning students or other attendees questions at any time during the workshop. You will soon discover that our members here at CEW are very open, supportive, and welcoming to all. Whether it be expanding your current professional network or building personal relationships, the connections made at CEW are invaluable. The CEW Student Program is well known for its emphasis on student development and networking opportunities, and this year is no exception! We are once again offering an in-person workshop experience, and have structured our student networking, learning, and social events with opportunities for all attendees to participate. If you have already signed up for events with the Student Program, you would have been contacted via email before the CEW began and will find tickets to these events you have registered for in your registration packages. If you haven't signed up for the student events, please feel free to join us for any "Drop In" activities or consider attending these events with us next year! On the next page is a list of events scheduled for this week. You can find more information about the student events on our website or you can reach out to us via email or come say hi to us at the workshop!

Organising the student events would not have been possible without the help of our wonderful student volunteers. Don't forget to say hi to the amazing Student Program Sub-Committee members during the workshop!

Cheers,

2023 Graduate Student Advisors

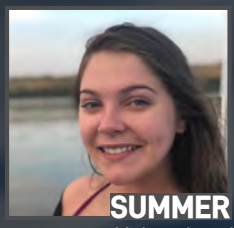
BRAEDON HUMENIUK
University of Manitoba
humeniub@myumanitoba.ca

REYD SMITH
Carleton University
reydsmith@cmail.carleton.ca

CONNOR STEWART
University of Alberta

FLAVIE DESREAC
INRS

KARYN ROBICHAUD
University of Waterloo

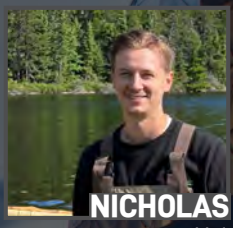


SUMMER SELINGER
University of Saskatchewan

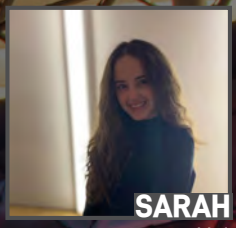
SANA GAVRIKAR
University of Waterloo

IMMANUELA EZUGBA
University of Saskatchewan

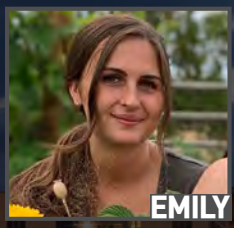
EDGAR PEREZ
University of Saskatchewan



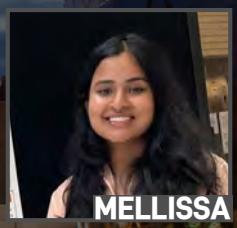
NICHOLAS BLANDFORD
University of Manitoba



SARAH KOWALCZYK
University of Waterloo



EMILY KENNEDY
University of Saskatchewan



MELLISSA EASWARAMOORTHY
McMaster University

MADELEINE MILNE
University of Manitoba

EVAN KOHLMAN
University of Saskatchewan

LEAH DICKENSON
University of Manitoba

MOIRA IJZERMAN
University of Guelph

HANNA ULMER
University of Saskatchewan

KRISTA ROBERTSON
University of Manitoba

NICHOLAS LETWIN
University of Guelph

HEATHER JOVANOVIC
University of Manitoba

YARYNA KUDLA
University of Guelph

PIUS TETTEH
University of Prince Edward Island

NOT PICTURED:

EMILIE DIESBOURG
McMaster University

CATHERINE DAVILA-ARENAS
University of Saskatchewan

AMANDINE GREIL
INRS

FLEUR ISSAC
University of Alberta

student committee

STUDENT PROGRAM

Student-Mentor Networking Event

Monday Oct 2 | 17:30

COLONEL BY FOYER

Join us Monday evening on October 2nd to meet fellow attendees and professionals from academic, industry, and government backgrounds! During this speed-networking event, mentors and mentees will be seated such that mentees rotate to new tables every fifteen minutes. Each "table" will have some suggested questions covering a wide range of topics including, but not limited to, job/postdoc search tips, work/life balance, early career advice, science communication and media, and equality, diversity, and inclusivity in science that the seated parties can discuss. This is a great opportunity to identify mentors that you would like to get to know over the course of the workshop. Light snacks will be served.

Student-Mentor Lunch

Tuesday Oct 3 | 12:00

TRILLIUM BALLROOM

The Tuesday Student-Mentor lunch provides another opportunity for students to meet and discuss career options or advice with mentors from different career sectors (e.g., academia, government, and industry) with fewer workshop distractions. The event will consist of mentees choosing or being assigned to mentor tables, with each table being given ice breaker questions to facilitate conversation. **Once you grab lunch, please join in this great opportunity for casual conversations with mentors and fellow students to create and develop new connections!**

Missed pre-registration for our other student activities (including our Buddy System, Session Co-Chairing and Co-Judging), student travel grants, and more? Or interested in joining the Student Committee at CEW 2024? Learn more about them at the link below and be sure to sign up for CEW 2024!

Learn more about the student program

ecotoxcan.ca/student-program

Poster and Platform Competition

Great research and hard work should be rewarded, and that's why we have awards for best platform and poster presentations. The purpose of this competition is to encourage students to present their research in a supportive public forum, such that they may benefit from feedback on their research and enhance their communication skills. Each student will be evaluated by at least two judges, and the Student Awards Ceremony will take place during the last day of the workshop on Thursday.
(Note: pre-registration required at time of abstract submission)

TikTOX Competition

The CEW TikTOX competition offers a platform for students to share their research in a fun, concise, and creative way! The goal is to capture the audience's attention in a short (2-3 minute) video by showcasing the exciting and intriguing aspects of their research, methods, or a day in the life of an ecotox researcher. All TikTOX videos will be pre-recorded, judged online via a scoring rubric, and played live for all attendees during the workshop.

#CEWTweetYourThesis

Science communication through social media is becoming increasingly popular, and we're challenging students of CEW to join in and spread the word about their research by explaining their thesis in three tweets.

View this year's posts at the hashtag
#CEWTweetYourThesis
twitter.com/ecotoxcan

Meme Competition

What better way to deal with the crippling pressures of school work than with humour? Here, students and non-students alike compete by designing their own ecotoxicology memes to communicate the funny side of your science! There are cash prizes for the best meme. Check out memes from last year below.
Like and repost your favourite memes on social media!

VOTE FOR YOUR FAVOURITE MEME VIA OUR SOCIALS

@ECOTOXCAN | Canadian Ecotoxicity Workshop **on LinkedIn**

SHORT COURSES & WORKSHOPS
MONDAY OCT 2

This year's short course program features an amazing diversity of learning opportunities, including two no-cost workshops in recognition of the National Day for Truth and Reconciliation. **Pre-registration is required.**

Full course descriptions and details
ecotoxcan.ca/scientific-program

short courses

R workshop: analyzing environmental data with numerous non-detects
Zofia Taranu | Environment and Climate Change Canada
SHAW 104 | 09:00 - 12:00

Development and implementation of Canadian environmental quality guidelines
Janet Cermak, Allison Dunn, Tamzin El-Fityani, Bill Martin
National Guidelines and Standards Office, Environment and Climate Change Canada
SHAW 106 | 09:00 - 16:00

Risk communication in a changing world
Ronald W. Brecher, Trevor Smith Diggins | RiskPartners
ONLINE | 09:00 - 12:00

National Day for Truth and Reconciliation workshops

Emerging good practices in bringing together Indigenous and scientific ways of knowing
Laura S. Lynes, Henry (Harry) Penn | Resilience Institute
SHAW 102 | 13:00 - 15:00

Blanket Exercise
Elder Barbara Dumont-Hill, Larry Hill
SHAW 102 | 15:30 - 17:30

SOCIAL PROGRAM

evening socials

RIDEAU CANAL ATRIUM

Connect with other CEW attendees and enjoy light refreshments at our
OPENING RECEPTION (Monday Oct 2 | 19:30)
POSTER SOCIALS (Tuesday Oct 3 | 17:00 and Wednesday Oct 4 | 17:00)

CEW banquet

WEDNESDAY Oct 4 | 19:00, TRILLIUM BALLROOM

The Banquet is the highlight for many CEW attendees. Join us for an evening full of good food, great conversations, and entertainment. Dinner will be a sit down plated dinner at the Shaw Centre, followed by entertainment. Bring your dancing shoes!

JILL HEINERTH

Explorer-in-Residence
The Royal Canadian Geographical Society

More people have walked on the moon than have visited many of the places that Jill Heinerth has seen on Earth. From the most dangerous technical dives deep inside underwater caves, to searching for never-before-seen ecosystems inside giant Antarctic icebergs, Heinerth's curiosity and passion about our watery planet is the driving force in her life. In her visually stunning presentations, she encourages audiences to reach beyond their limitations, challenge the unknown, and overcome their fears, while sharing practical lessons on risk management, discovery learning, failure, and collaboration.

From desert oases of the Sahara to Baffin Bay's cold waters, Heinerth has been the hands and eyes for climatologists, archaeologists, and engineers worldwide. She led the first dives into underwater caves inside Antarctica's massive B-15 iceberg and was a lead diver on a ground-breaking US Deep Caving Team project, piloting the first accurate 3D cave mapping device using tech that's now bound for space.

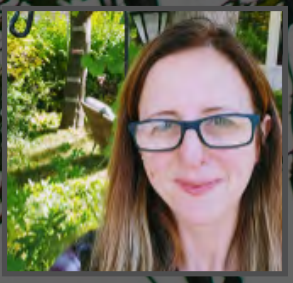
Heinerth was named the first Explorer-in-Residence of The Royal Canadian Geographical Society in 2016. She was the 2021 recipient of the Explorer's Club Stefansson Medal for her lifetime of work in exploration. In recognition of her lifetime achievement, Heinerth also received the Wyland ICON Award, an honour she shares with several of her underwater heroes including Jacques Cousteau, Robert Ballard, and Dr. Sylvia Earle. She was also awarded the inaugural Sir Christopher Ondaatje Medal for Exploration, which recognizes singular achievements and the pursuit of excellence by an outstanding Canadian explorer.

A bestselling author, Heinerth's first book Into the Planet, was lauded by the Wall Street Journal, Oprah Magazine, and the New York Times. Her children's book, The Aquanut, is a Blue Ribbon Selection for Dolly Parton's Imagination Library. Heinerth is a fellow of the International Scuba Diving Hall of Fame, Underwater Academy of Arts and Sciences, Women Divers Hall of Fame, and the Explorers Club, which also awarded her with the William Beebe Award.

Learn more about Jill at Red Bull TV

redbull.com/ca-en/episodes/stories-in-motion-s1-e6

CEW BOARD OF DIRECTORS



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RICKWOOD

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Chair of the Board of Directors

LISA
TAYLOR

Nautilus Environmental Company Inc.
Vice President/
Vice-chair of the Board of Directors

JULIE
ANDERSON

Health Canada
Treasurer

NATACHA
HOGAN

University of Saskatachewan
Awards Coordinator/
Vice-Communications Officer

BONNIE
LO

Simon Fraser University
Graduate Student Board Liaison

Interested in organising a CEW or being part of the Board of Directors?
Email us or see our website (linked below) for more details on how to get involved.

info@ecotoxcan.ca

Visit our CEW Corporate website or contact the Directors to find information on:

CEW History | Awards & Grants | Past Proceedings | Membership

Learn more about CEW's Board of Directors, operations, and more!

ecotoxcan.ca/cew-corporate-home

Outstanding Contribution Award

Dr. Kelly Munkittrick

Professor; Campus Alberta Innovation Program Chair in Aquatic Ecosystem Health
Department of Biological Sciences, University of Calgary

In his over 30-year career, Kelly has been a leader in Canadian ecotoxicology. He has led research programs on the impacts of oil sands, pulp mills, agriculture, municipal wastewaters, oil refineries and metal and coal mines on fish populations and river ecosystems across Canada. Kelly is known to many in the ecotoxicology field as a very committed supporter and mentor to students and young professionals in various sectors (i.e., academia, government, consulting). At CEW, Kelly has always been a positive and encouraging supporter of the student programs and has introduced many young scientists to the field through CEW.

Dr. Richard Playle Award for Outstanding Thesis

These awards (one each at the BSc and MSc levels) were established by the Aquatic Toxicity Workshop (ATW), the precursor to CEW, in memory of Dr. Richard Colin Playle, a Professor of Biology at Wilfrid Laurier University from 1992 to 2005, who was an enthusiastic supporter of ATW and whose original insight spawned what was essentially a new area of research in aquatic toxicology: Biotic Ligand Modeling.

M.Sc. Winner

Chloe Devoy

University of Lethbridge

Multigenerational effects of the novel brominated flame retardant 1,2,5,6-tetrabromocyclooctane on reproductive performance in Japanese medaka

B.Sc. Winner

Chantel De Lange

University of Saskatchewan

Assessing cytotoxicity of legacy and emerging antimicrobial compounds in rainbow trout (Oncorhynchus mykiss) RTgill-W1 gill cells

MONDAY Schedule at a Glance

<table>
<tr><th></th><th>SHAW 102</th><th>SHAW 104</th><th>SHAW 106</th><th>VIRTUAL</th></tr>
<tr><td>08:00</td><td colspan="4">Registration Desk open (08:00 - 17:30)</td></tr>
<tr><td>09:00</td><td rowspan="2"></td><td>Short Course
R Workshop: Analyzing environmental data with numerous non-detects</td><td>Short Course
Development and implementation of Canadian environmental quality guidelines</td><td>Short Course
Risk communication in a changing world</td></tr>
<tr><td>12:00</td><td colspan="2">Lunch | Colonel By Foyer</td><td rowspan="6"></td></tr>
<tr><td>13:00</td><td rowspan="3">National Day for Truth and Reconciliation programming:

Emerging good practices in bringing together Indigenous and scientific ways of knowing</td><td rowspan="5"></td><td>Short Course
Development and implementation of Canadian environmental quality guidelines</td></tr>
<tr><td>14:30</td><td>Refreshment Break | Colonel By Foyer</td></tr>
<tr><td>15:00</td><td>Refreshment Break | Colonel By Foyer</td><td rowspan="2">Short Course
Development and implementation of Canadian environmental quality guidelines</td></tr>
<tr><td>15:30</td><td rowspan="2">National Day for Truth and Reconciliation programming:

Blanket Exercise</td></tr>
<tr><td>17:15</td><td></td></tr>
<tr><td>17:30</td><td colspan="4">Student / Mentor Mixer | Colonel By Foyer</td></tr>
<tr><td>19:30</td><td colspan="4">Opening Reception | Rideau Canal Atrium</td></tr>
<tr><td>22:00</td><td colspan="4">End of Monday Program</td></tr>
</table>

TUESDAY Schedule at a Glance

	OTTAWA SALON	SHAW 209	SHAW 210	SHAW 211	SHAW 212
07:30	**Registration Desk open (07:30 - 19:00)** **Poster set-up (ends at 08:30)**				
08:30	**Opening Remarks & Plenary Presentation**				
10:00	**Refreshment Break |** Rideau Canal Atrium				
10:30	**Concurrent Sessions Start**				
	New methods and novel approaches for assessing and monitoring environmental contaminant mixtures or individual priority substances	Incorporating Indigenous perspectives into environmental management: the importance of Two-Eyed seeing	Wildlife ecotoxicology: exposure, accumulation, and effects	Emerging contaminants in wastewater effluents: exposure, effects, and possible environmental risk	Mining and the environment
12:00	**Lunch & Student / Mentor Lunch |** Trillium Ballroom				
13:30	New methods and novel approaches for assessing and monitoring environmental contaminant mixtures or individual priority substances	General Ecotoxicology: soil, sediment, water, air, and biota	Wildlife ecotoxicology: exposure, accumulation, and effects	Emerging contaminants in wastewater effluents: exposure, effects, and possible environmental risk	Mining and the environment
15:00	**Refreshment Break |** Rideau Canal Atrium				
15:30	New methods and novel approaches for assessing and monitoring environmental contaminant mixtures or individual priority substances	General Ecotoxicology: soil, sediment, water, air, and biota	Wildlife ecotoxicology: exposure, accumulation, and effects	Tackling the challenge of understanding ecological effects of per and polyfluoroalkyl substances	Advancements in biogeochemistry, environmental fate, ecotoxicology and environmental management of selenium
17:00	**Poster Social |** Rideau Canal Atrium				
19:00	**Remove posters** **Registration Desk closes**				
	End of Tuesday Program				

WEDNESDAY Schedule at a Glance

	OTTAWA SALON	SHAW 209	SHAW 210	SHAW 211	SHAW 212
07:30	**Registration Desk open (07:30 - 19:00)** **Poster set-up (ends at 08:30)**				
08:30	**Playle & Outstanding Contribution Awards** **TikTOX videos & Meme Competition**				
10:00	**Refreshment Break |** Rideau Canal Atrium				
10:30	**Concurrent Sessions Start**				
	Plastic pollution in terrestrial and aquatic environments – fate, impacts and management strategies	Living Laboratories – Advancing sustainable production practices in Canadian agriculture	Latest advances in fate and effects of metals in the natural environment	From lab to nature: applying environmental relevance to standardized toxicity testing	Inspiring Science in the Capital - Investigation, Integration, and Implementation
12:00	**Lunch |** Trillium Ballroom				
13:30	Plastic pollution in terrestrial and aquatic environments – fate, impacts and management strategies	Exposure, effects, and risk assessment of pesticides in the environment	Latest advances in fate and effects of metals in the natural environment	From lab to nature: applying environmental relevance to standardized toxicity testing	Pollution's power play: effects of contaminants on metabolism and energetics
15:00	**Refreshment Break |** Rideau Canal Atrium				
15:30	Plastic pollution in terrestrial and aquatic environments – fate, impacts and management strategies	Exposure, effects, and risk assessment of pesticides in the environment	Latest advances in fate and effects of metals in the natural environment	'Omics in ecotoxicology: predictive and diagnostic applications	The effects of contaminants in a changing climate
17:00	**Poster Social |** Rideau Canal Atrium				
19:00	**Remove posters** **Registration Desk closes**				
19:00	**CEW 2023 Banquet |** Trillium Ballroom (Service starts at 19:30)				
00:00	**End of Wednesday Program**				

THURSDAY Schedule at a Glance

	OTTAWA SALON	SHAW 209	SHAW 210
08:30	**Registration Desk open (08:30 - 12:00)**		
09:00	**Concurrent Sessions Start**		
	Environmental DNA (eDNA): research and applications to assess biodiversity and supporting aquatic ecosystem health management	Ecotoxicology of tire and road wear particles and related contaminants – where are we 3 years after the identification of 6PPD-quinone?	Exposure, accumulation and effects of radionuclides
10:00	**Refreshment Break |** Rideau Canal Atrium		
10:30	Environmental DNA (eDNA): research and applications to assess biodiversity and supporting aquatic ecosystem health management	Ecotoxicology of tire and road wear particles and related contaminants – where are we 3 years after the identification of 6PPD-quinone?	Exposure, accumulation and effects of radionuclides
11:45	**Lunch |** Trillium Ballroom		
13:15	**Annual General Meeting & Student Awards**		
15:00	**End of CEW 2023**		

TUESDAY SESSIONS

New methods and novel approaches for assessing and monitoring environmental contaminant mixtures or individual priority substances
Rick Scroggins (ECCC) | Jennifer Miller (Miller Environmental Sciences Inc.)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00 | Block 3: 15:30 - 17:00

Incorporating Indigenous perspectives into environnmental management: the importance of Two-Eyed seeing
Rebecca Eldridge (Dillon Consulting Ltd.) | Annabelle Laurin (SOAR Professional Services)

Block 1: 10:30 - 12:00

Wildlife ecotoxicology: exposure, accumulation, and effects
Shane de Solla (ECCC) | Raphaël Lavoie (ECCC) | Christina Petalas (McGill University)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00 | Block 3: 15:30 - 17:00

Emerging contaminants in wastewater effluents: exposure, effects, and possible environmental risk
Jose Luis Rodriguez Gil (IISD-ELA) | Ryan Prosser (University of Guelph)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00

Mining and the environment
Charles Dumaresq (Mining Association of Canada) | Jorgelina Muscatello (Lorax Environmental Services Ltd.)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00

General ecotoxicology: soil, sediment, water, air, and biota
David Janz (University of Saskatchewan) | Chris Kennedy (Simon Fraser University) | Elena Legrand (Stantec Consulting Ltd.) | Krittika Mittal (McGill University)

Block 2: 13:30 - 15:00 | Block 3: 15:30 - 17:00

Tackling the challenge of understanding ecological effects of per and polyfluoroalkyl substances
Ève Gilroy (ECCC) | Amy Rand (Carleton University)

Block 3: 15:30 - 17:00

Advancements in biogeochemistry, environmental fate, ecotoxicology and environmental management of selenium
Vince Palace (IISD-ELA) | Liz Ashby (ECCC)

Block 3: 15:30 - 17:00

Session descriptions and session chair contact info

ecotoxcan.ca/scientific-program

TUESDAY MORNING Platform Presentations - Block 1

	10:30	10:45	11:00
OTTAWA SALON	**NEW METHODS AND NOVEL APPROACHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES**		
	Minding the (data) gap: development of toxicity test methods with pulmonate freshwater snails | **ÈVE GILROY**, Environment and Climate Change Canada	High-throughput determination of hepatic clearance as a screening tool for bioaccumulation using isolated perfused trout livers and diverse mixtures | **MATTHEW SCHULTZ**, University of Saskatchewan	Canadian adaptation of the *Ceramium tenuicorne* ISO 10710 standard and preliminary evaluation using pulp and paper mill effluent | **CAROLYN MARTINKO**, Environment and Climate Change Canada
SHAW 209	**INCORPORATING INDIGENOUS PERSPECTIVES INTO ENVIRONMENTAL MANAGEMENT**		
	Bridging Indigenous and western knowledge systems: exploring the importance of Two-Eyed Seeing in environmental management | **ANNABELLE LAURIN**, SOAR Professional Services	Human health and ecological risk assessments in Indigenous communities: a survey of practitioners in Canada | **KATHERINE CHONG**, McGill University	Workshop on best practices for recognizing and including multiple ways of knowing in State of Environment reporting | **ASHLEY MAHAFFEY**, University of Calgary
SHAW 210	**WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS**		
	Target development for molybdenum using wildlife risk assessment techniques – a case study on the challenges associated with the use of uncertainty factors during guideline development | **BRETT LUCAS**, Hatfield	Mercury exposure in relation to foraging ecology in breeding razorbills | **CHRISTINA PETALAS**, McGill University	Unveiling discrepancies in mercury biomagnification through compound-specific stable nitrogen isotope analysis and bulk methods | **ROSE LACOMBE**, McGill University
SHAW 211	**EMERGING CONTAMINANTS IN WASTEWATER EFFLUENTS: EXPOSURE, EFFECTS, AND POSSIBLE ENVIRONMENTAL RISK**		
	Antibiotics and antimicrobials in wastewater treatment plants and environmental water samples | **JADE WISH**, University of Manitoba	Partitioning of micropollutants in biota and environmental samples collected in replicate artificial streams | **DANIELA PULGARIN ZAPATA**, University of Alberta	Regional analysis of opioid consumption with wastewater-based epidemiology | **TYLER DOW**, Ontario Tech University
SHAW 212	**MINING AND THE ENVIRONMENT**		
	Defining and quantifying stress/disturbance gradients for young wetlands forming in reclaimed oil sands landscapes | **JAN CIBOROWSKI**, University of Calgary	Developing monitoring triggers to detect water quality changes associated with unplanned releases from an oil sands tailings pond in the Athabasca oil sands region of Alberta | **PRABHA RUPASINGHE**, University of Calgary	Modelling background conditions in the lower Athabasca River to support adaptive monitoring in the oil sands region | **SAWYER STOYANOVICH**, Kilgour and Associated Ltd.

	11:15	11:30	11:45
OTTAWA SALON	**NEW METHODS AND NOVEL APPRAOCHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES**		
	Evaluation of a novel toxicity test method with *Hyalella azteca* to optimize reproduction endpoints | **HUFSA KHAN**, University of Guelph	Methodological challenges when conducting sediment toxicity identification evaluations (TIEs): lessons learned | **KATHLEEN STEVACK**, Ontario Ministry of Environment, Conservation and Parks	Organic matter decomposition – a new microbial laboratory ISO standard | **STEPHANIE KVAS**, Environment and Climate Change Canada
SHAW 209	**INCORPORATING INDIGENOUS PERSPECTIVES INTO ENVIRONMENTAL MANAGEMENT**		
	Development of a traditional foods study framework that prioritizes Indigenous community involvement | **MITCHELL THORARINSON**, Canada North Environmental Services	An academic's perspectives on science communication and teamwork when working with Moose Cree First Nation and Wildlife Conservation Society Canada | **DENINA SIMMONS**, Ontario Tech University	Discussion Block
SHAW 210	**WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS**		
	Lead exposure of scavenging birds in Canada due to accidental ingestion of lead ammunition | **JOHN CHETELAT**, Environment and Climate Change Canada	Elements and essential fatty acids in fishes along a large, dammed river | **JENNI VELICHKA**, McMaster University	Ecological factors driving differences in PCB bioaccumulation in two Laurentian Great Lakes birds | **SHANE de SOLLA**, Environment and Climate Change Canada
SHAW 211	**EMERGING CONTAMINANTS IN WASTEWATER EFFLUENTS: EXPOSURE, EFFECTS, AND POSSIBLE ENVIRONMENTAL RISK**		
	Monitoring endocrine disrupting chemicals in wastewater with bioassays: a proof-of-concept from Quebec, Canada | **JULIE ROBITAILLE**, INRS-ETE	Progress and understating of genotoxicity and mutagenicity testing of treated water for emerging contaminants | **WILL LUSH**, Environmental Bio-Detection Products Inc.	Direct and indirect effects of flowback and produced water (FPW) from hydraulic fracturing on California blackworm (*Lumbriculus variegatus*) and Fathead minnows (*Pimephales promelas*) | **ARIAN FARAJIZADEH**, University of Alberta
SHAW 212	**MINING AND THE ENVIRONMENT**		
	Toxicity assessment of sediment from an oil sands pilot pit lake containing permanent aquatic storage structure (pass) treated tailings | **IMMANUELA EZUGBA**, University of Saskatchewan	Spatio-temporal analysis of water chemistry and ecotoxicological risk characterization of a pilot-scale pit lake in the Athabasca oil sands region | **BANAMALI PANIGRAHI**, University of Saskatchewan	Putting the puzzle pieces together: metal modeling, toxicity testing, and tissue uptake to identify cause of effects for a gold mine EEM | **ELENA LEGRAND**, Stantec Consulting Ltd.

TUESDAY AFTERNOON Platform Presentations - Block 2

	13:30	13:45	14:00
OTTAWA SALON	**NEW METHODS AND NOVEL APPROACHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES**		
	From genes to functions: illuminating microbial diversity and functional profiles in a highly impacted river system using next-generation sequencing techniques | **MILENA ESSER**, University of Saskatchewan	Exploring environmental thresholds for aquaculture drugs: assessing the toxicity of spiked sediments on sea urchins using a Central Composite Rotatable Design | **DAVIDE ASNICAR**, Huntsman Marine Science Centre	A new approach methodology that integrates the zebrafish (*Danio rerio*) embryo acute toxicity test with behaviour, metabolic and transcriptomic assays | **JASON O'BRIEN**, Environment and Climate Change Canada
SHAW 209	**GENERAL ECOTOXICOLOGY: SOIL, SEDIMENT, WATER, AIR, AND BIOTA**		
	Confirmation bias and the proliferation of erroneous research and publication bias | **SHANE de SOLLA**, Environment and Climate Change Canada	Trends in water quality for irregular time series data | **JEFF ROW**, Minnow Aquatic Environmental Services	Establishing best practices in quantifying aquatic chemistry reference conditions through a simulated approach | **EMILY DUTTON**, Minnow Aquatic Environmental Services
SHAW 210	**WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS**		
	Long-term trends of organohalogenated contaminants and mercury in the Great-blue Heron across the St. Lawrence River and Estuary | **RAPHAËL LAVOIE**, Environment and Climate Change Canada	Multi-omic investigation of namew (lake sturgeon) health in an intact and an impacted watershed in the Moose Cree Homeland | **KEISHA DEORAJ**, Ontario Tech University	Pollutants of concern in aquatic mammals of Western Canada, their interaction with parasitic infection, and effects on host energetic condition | **KYLE SHANEBECK**, University of Alberta
SHAW 211	**EMERGING CONTAMINANTS IN WASTEWATER EFFLUENTS: EXPOSURE, EFFECTS, AND POSSIBLE ENVIRONMENTAL RISK**		
	Comparison of the sensitivity of early-life stages of three North American fish species to antimicrobial chemicals | **EVAN KOHLMAN**, University of Saskatchewan	Impacts of antimicrobial exposure on the gut microbiome of early-life stage fish: a chemical and species comparison | **PHILLIP ANKLEY**, University of Saskatchewan	Enantioselective effects of venlafaxine on the antioxidative defense system in rainbow darters (*Etheostoma caeruleum*) | **SANA GAVARIKAR**, University of Waterloo
SHAW 212	**MINING AND THE ENVIRONMENT**		
	Best practices for establishing exposure and reference sites for metal mining environmental effects monitoring (EEM) studies | **SARAH COSTANTINI**, Story Environmental Inc.	The characterization of natural variability within EEM and subsequent decision making processes | **KEVIN MARTENS**, Minnow Environmental Inc.	Elevated copper and shifts in aquatic and riparian invertebrate microbiomes at a site impacted by historic mining | **KAREN KIDD**, McMaster University
	14:15	**14:30**	**14:45**
OTTAWA SALON	**NEW METHODS AND NOVEL APPRAOCHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES**		
	Towards development of an in vitro assay of oocyte maturation inhibition to predict reproductive capacity of fishes | **STEVE WISEMAN**, University of Lethbridge	Low-dose methylmercury promotes prenatal neuronal differentiation and autism spectrum disorder-like behaviours in early adulthood | **ALLISON LOAN**, University of Ottawa	Characterization of molecular and apical effects of legacy contaminated groundwater in fathead minnows using the EcoToxChip system | **MARKUS HECKER**, University of Saskatchewan
SHAW 209	**GENERAL ECOTOXICOLOGY: SOIL, SEDIMENT, WATER, AIR, AND BIOTA**		
	Pairing wild rice and fish farming in a circular economy | **NICHOLAS BLANDFORD**, University of Manitoba	The response of zooplankton communities when exposed to aquaculture wastewater within wild rice planted mesocosms | **LEAH DICKENSON**, University of Manitoba	Eutrophication is a cumulative environmental impact problem for watersheds not waterbodies | **LYNN McCARTY**, L.S. McCarty Scientific Research & Consulting
SHAW 210	**WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS**		
	A first detailed meta-assessment of PCBs, OCs, and brominated flame retardants in killer whales across the North Atlantic Ocean indicates that diet explains most variation | **ANAIS REMILI**, McGill University	Tracking flame retardants in air from the back of a gull: the landfill effect | **JONATHAN VERREAULT**, Université du Québec à Montréal	Assessing the lethal and sublethal effects of Oil Sands Process-Affected Water in early life stage wood frogs (*Lithobates sylvaticus*) | **KATELYN STENNER**, Simon Fraser University
SHAW 211	**EMERGING CONTAMINANTS IN WASTEWATER EFFLUENTS: EXPOSURE, EFFECTS, AND POSSIBLE ENVIRONMENTAL RISK**		
	The effect of 17β-estradiol on *Capitella teleta* adult behavior | **ANDREA MURILLO**, McMaster University	Responses of freshwater invertebrate microbiomes to municipal wastewater effluents | **EMILIE DIESBOURG**, McMaster University	Introducing shinywqbench: an online tool for calculating aquatic life water quality benchmarks for emerging contaminants | **ALI AZIZISHIRAZI**, B.C. Ministry of Water, Land and Resource
SHAW 212	**MINING AND THE ENVIRONMENT**		
	Trace elements in fish from an industrial region located within the Traditional Territory of two First Nations near Sudbury, Ontario | **ADAM LEPAGE**, Laurentian University	Linking the competition among three rare earth elements (lanthanum, cerium and, yttrium) with the bioavailability to *Chlamydomonas reinhardtii* using the biotic ligand model | **LAURIANNE PAGÉ**, Université de Montréal	Environmental monitoring and remediation at giant mine – 'it takes a village' | **TAMARA DARWISH**, WSP

TUESDAY AFTERNOON Platform Presentations - Block 3

	15:30	15:45	16:00
OTTAWA SALON	**NEW METHODS AND NOVEL APPRAOCHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES**		
	Towards establishing a 24-hour, microplate-based, transcriptomics assay for rainbow trout embryos | **AYLISH MARSHALL**, McGill University	EcoToxChips as a new approach method in chemical toxicity assessment for amphibians | **NATACHA HOGAN**, University of Saskatchewan	In vitro screening of UV-stabilizers and UV filters: cytotoxicity, CYP1A activity, and mRNA expression in an immortalized double-crested cormorant cell line | **TASNIA SHARIN**, McGill University
SHAW 209	**GENERAL ECOTOXICOLOGY: SOIL, SEDIMENT, WATER, AIR, AND BIOTA**		
	Toxicity of oil sands groundwater naphthenic acid fractions in fathead minnow and walleye embryos and larvae | **JOANNE PARROTT**, Environment and Climate Change Canada	Investigating the barriers to recovery in culturally and ecologically valuable clam populations impacted by an oil spill | **TYLER BLACK**, University of Guelph	Characterising the geochemical evolution and subsequent aquatic toxicity of a diluted bitumen spill within the saturated zone of a sand aquifer | **SCOTT HEPDITCH**, INRS
SHAW 210	**WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS**		
	Quantifying insecticide exposure risk to barn swallows of Saskatchewan | **CHRISTY MORRISSEY**, University of Saskatchewan	Exposure, repellency, and learned aversion to neonicotinoid-treated seeds in granivorous birds | **SHUQI REN**, University of Saskatchewan	Modulatory effects of nutrition on neonicotinoid-induced developmental toxicity in tree swallows (*Tachycineta bicolor*) | **BIYAO HAN**, University of Saskatchewan
SHAW 211	**TACKLING THE CHALLENGE OF UNDERSTANDING ECOLOGICAL EFFECTS OF PER AND POLYFLUOROALKYL SUBSTANCES**		
	Potentiation of the PFOA uptake in Daphnia (*Daphnia magna*) by TiO2 nanoparticles | **GREG GOSS**, University of Alberta	Exposure to short-chain PFSAs increases liver mass in northern leopard frog (*Rana pipiens*) tadpoles | **JILLIAN ROHONCZY**, Carleton University	The impact of per- and polyfluoroalkyl substances (PFAS) on oxylipin stress markers | **AMY RAND**, Carleton University
SHAW 212	**ADVANCEMENTS IN BIOGEOCHEMISTRY, ENVIRONMENTAL FATE, AND ECOTOXICOLOGY AND MANAGEMENT OF SELENIUM**		
	Guidance for assessing potential impacts of selenium in freshwater aquatic ecosystems | **VINCE PALACE**, IISD-ELA	The implications of science communication in reporting of the risks posed by selenium in Canadian coal mine effluents | **GUY GILRON**, Borealis Environmental Consulting Inc.	Mechanisms of waterborne selenite uptake in freshwater invertebrates and fish are not conserved: effects of water chemistry on selenium toxicity | **CHANTELLE KLACZEK**, University of Alberta
	16:15	**16:30**	**16:45**
OTTAWA SALON	**NEW METHODS AND NOVEL APPRAOCHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES**		
	Performance of Japanese quail EcoToxChips in a Multi-lab Ring Test | **JESSICA HEAD**, McGill University	Incorporation of new approach methods into species sensitivity distributions for ecological risk assessment | **FLORENCE PAGÉ-LARIVIÈRE**, Environment and Climate Change Canada	Addressing endocrine disruption in freshwater: a glimpse into developing recommendations to implement new monitoring methods into policy | **JULIE ROBITAILLE**, INRS-ETE
SHAW 209	**GENERAL ECOTOXICOLOGY: SOIL, SEDIMENT, WATER, AIR, AND BIOTA**		
	Assessing the effect of a minimally invasive oil spill remediation method on shoreline biofilm communities | **HAKEEM OMILOWO**, University of Manitoba	Plant-enhanced phenanthrene reduction from freshwater microcosms | **MADELINE STANLEY**, University of Manitoba	Behaviour and brain size of larval zebrafish exposed to environmentally relevant concentrations of β-methylamino-L-alanine (BMAA) | **AMANDA RESIDE**, University of Guelph
SHAW 210	**WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS**		
	Quantifying responses of American toad tadpoles to microplastics in the environment using an in-situ assay | **JIHYUN KIM**, Queen's University	Using transcriptomics and early-life stage toxicity testing to assess the sensitivity of two avian species to UV absorbents | **RAMELA KOUMROUYAN**, McGill University	Nontarget screening reveals the presence of multiple plastic related compounds in blubber of polar bear, killer whale, narwhal and pilot whale from East Greenland | **ADAM PEDERSEN**, McGill University
SHAW 211	**TACKLING THE CHALLENGE OF UNDERSTANDING ECOLOGICAL EFFECTS OF PER AND POLYFLUOROALKYL SUBSTANCES**		
	Are individual perfluoroalkyl acids associated with reproductive success of tree swallows? Beyond PFOS and PFOA | **KAILEE HOPKINS**, McGill University / ECCC	Sex differentiated biotransformation of 6:2 disubstituted polyfluoroalkyl phosphate in human fecal *in vitro* suspensions | **SIERRA PESKETT**, Carleton University	Discussion Block
SHAW 212	**ADVANCEMENTS IN BIOGEOCHEMISTRY, ENVIRONMENTAL FATE, AND ECOTOXICOLOGY AND MANAGEMENT OF SELENIUM**		
	The inverse relationship between ovary selenium concentrations and gonadosomatic index: implications for sample collection and data interpretation | **NICOLE ZATHEY**, Teck Coal Limited	State of practice: selenium bioaccumulation models in Canadian environmental assessment | **KATE MILL**, KCM Environmental	Lessons learned in an uncertain climate: refining a large monitoring program affected by unexpected weather | **CYBELE HEDDLE**, Teck

WEDNESDAY SESSIONS

Plastic pollution in terrestrial and aquatic environments – fate, impacts and management strategies
Colleen Wardlaw (McMaster University) | Quinn Allamby (McMaster University) | Karen Kidd (McMaster University)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00 | Block 3: 15:30 - 17:00

Living Laboratories – Advancing sustainable production practices in Canadian agriculture
Adrienne Bartlett (ECCC) | Eric Page (Agriculture and Agri-Food Canada) | Pamela Joosse (Agriculture and Agri-Food Canada)

Block 1: 10:30 - 12:00

Latest advances in fate and effects of metals in the natural environment
Anne Crémazy (INRS) | Yamini Gopalapillai (International Copper Association) | Jim McGeer (Wilfrid Laurier University) | Celine Do (Wilfrid Laurier University)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00 | Block 3: 15:30 - 17:00

From lab to nature: applying environmental relevance to standardized toxicity testing
Aaron Boyd (University of Alberta) | Tamzin Blewett (University of Alberta)

Block 1: 10:30 - 12:00 | Block 2: 13:30 - 15:00

Inspiring Science in the Capital - Investigation, Integration, and Implementation
Leana Van der Vliet (ECCC) | Stacey Robinson (ECCC) | Rebecca Dalton (ECCC)

Block 1: 10:30 - 12:00

Exposure, effects, and risk assessment of pesticides in the environment
Sarah Crawford (Syngenta Canada) | Ryan Prosser (University of Guelph)

Block 2: 13:30 - 15:00 | Block 3: 15:30 - 17:00

Pollution's power play: effects of contaminants on metabolism and energetics
Paul Craig (University of Waterloo) | Karyn Robichaud (University of Waterloo)

Block 2: 13:30 - 15:00

'Omics in ecotoxicology: predictive and diagnostic applications
Jessica Head (McGill University) | Natacha Hogan (University of Saskatchewan) | Ève Gilroy (ECCC)

Block 3: 15:30 - 17:00

The effects of contaminants in a changing climate
Andrew Thompson (McMaster University) | Joanna Wilson (McMaster University) | Mellissa Easwaramoorthy (McMaster University)

Block 3: 15:30 - 17:00

WEDNESDAY MORNING Platform Presentations - Block 1

	10:30	10:45	11:00
OTTAWA SALON	**PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS**		
	The effects of shape and size on microplastic atmospheric settling velocity and particle entrainment | **COLETTE PRESTON**, Trent University	Distribution of microplastics in a background headwater lake during the ice and ice-free period | **BRITTANY WELSH**, Trent University	Spatial distribution and risk assessment of microplastic pollution in surface waters of the St. Lawrence Estuary | **NOREEN KELLY**, Fisheries and Oceans Canada
SHAW 209	**LIVING LABORATORIES - ADVANCING SUSTAINABLE PRODUCTION PRACTICES IN CANADIAN AGRICULTURE**		
	The Canadian Agroecosystem Living Laboratories network | **PAMELA JOOSSE**, Agriculture and Agri-Food Canada	Using aquatic ecological endpoints to assess agricultural practices in the Lake Erie Basin | **ADRIENNE BARTLETT**, Environment and Climate Change Canada	Assessing the fish community in Tributaries of Lake Erie Adjacent to Agricultural Activity | **GERALD TETREAULT**, Environment and Climate Change Canada
SHAW 210	**LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT**		
	Canadian water quality guidelines for metals | **SUSHIL DIXIT**, Environment and Climate Change Canada	Evaluation of total aluminum guidelines using chronic toxicity tests with aluminum-spiked mine water | **MEGHAN GOERTZEN**, Lorax Environmental Services Ltd.	Development of water quality guidelines for the protection of aquatic life for nickel using the biotic ligand model and other approaches | **ALI AZIZISHIRAZI**, BC Ministry of Water, Land and Resource Stewardship
SHAW 211	**FROM LAB TO NATURE: APPLYING ENVIRONMENTAL RELEVANCE TO STANDARDIZED TOXICITY TESTING**		
	Influence of confounding variables in toxicity tests | **JOSH BAKER**, Nautilus Environmental	Flux your stressors! Including diurnal fluctuations in temperature for more realistic stressor exposures | **PAUL CRAIG**, University of Waterloo	A critical evaluation of inherent toxicity and hazard paradigms in regulatory ecotoxicology | **LYNN McCARTY**, L.S. McCarty Scientific Research & Consulting
SHAW 212	**INSPIRING SCIENCE IN THE CAPITAL - INVESTIGATION, INTEGRATION, AND IMPLEMENTATION**		
	Bridging science and policy through environmental quality guidelines | **ALLISON DUNN**, Environment and Climate Change Canada	Canada's Chemicals Management Plan – Ecological risk assessment perspectives | **REBECCA DALTON**, Environment and Climate Change Canada	Validation and standardization are key design features for a New Approach Method: lessons from the EcoToxChip Project | **JESSICA HEAD**, McGill University

	11:15	11:30	11:45
OTTAWA SALON	**PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS**		
	Long-term fate and remediation of microplastics in subarctic lake sediments in the experimental lakes area (ELA), Canada | **HANNAH VONBERG**, Dalhousie University	The influence of microplastics on leaf litter degradation in oligotrophic freshwater lakes | **RACHEL MCNAMEE**, University of Waterloo	The effects of microplastics on freshwater phytoplankton and zooplankton communities in a boreal lake | **DESIREE LANGENFELD**, IISD-ELA
SHAW 209	**LIVING LABORATORIES - ADVANCING SUSTAINABLE PRODUCTION PRACTICES IN CANADIAN AGRICULTURE**		
	Living Labs in southern Ontario: Stream invertebrate health and watershed agricultural best practices | **LEE GRAPENTINE**, Environment and Climate Change Canada	Edge-of-field water quality monitoring for Living Lab – Ontario | **PATRICK HANDYSIDE**, Agriculture and Agri-Food Canada	Pesticide occurrence and dynamics in surface waters of two distinct agricultural and ecological regions of Canada | **CAITLIN WATT**, Agriculture and Agri-Food Canada
SHAW 210	**LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT**		
	Characterizing an effect of bicarbonate on chronic nickel toxicity to *Ceriodaphnia dubia* | **JORDANA VAN GEEST**, WSP Canada Inc.	Polar problem: investigating the Nickel sensitivity of Arctic aquatic invertebrates | **CONNOR STEWART**, University of Alberta	A predictive model created to understand how specific water quality characteristics govern the association of cadmium to microplastics in freshwater systems | **LAUREN ZINK**, University of Lethbridge
SHAW 211	**FROM LAB TO NATURE: APPLYING ENVIRONMENTAL RELEVANCE TO STANDARDIZED TOXICITY TESTING**		
	Unraveling the influence of metamorphosis on the fate and effects of contaminants in amphibians | **CHANTAL LANCTOT**, Griffith University	Field and lab analysis on the toxicity of lead from recreational fishing gear | **SABRINA St HILAIRE**, Wilfird Laurier University	A laboratory-based chronic toxicity model is predictive of nickel effects on benthic invertebrates in the field | **ADRIAN DE BRUYN**, ADEPT Environmental Sciences Ltd.
SHAW 212	**INSPIRING SCIENCE IN THE CAPITAL - INVESTIGATION, INTEGRATION, AND IMPLEMENTATION**		
	Protecting the environment with forethought in EIA | **CAROLYN BROWN**, Wilfrid Laurier University	Global Atmospheric Passive Sampling (GAPS) Network: integration and cross-cutting issues | **TOM HARNER**, Environment and Climate Change Canada	Working towards a long-term water monitoring program for pesticides | **JANICE VILLENEUVE**, Health Canada

WEDNESDAY AFTERNOON Platform Presentations - Block 2

	13:30	13:45	14:00
OTTAWA SALON	**PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS**		
	Investigating the combined effects of microplastic fibers and temperature on *Daphnia pulex* | **NATASHA KLASIOS**, University of British Columbia	The effects of microplastics on emerging insect and zooplankton communities in a limnocorral experiment | **YAEL LEWIS**, Queen's University	Examining aquatic-terrestrial transfer of microplastics sourced from wastewater treatment facilities in the Grand River Watershed, Ontario | **COLLEEN WARDLAW**, McMaster University
SHAW 209	**EXPOSURE, EFFECTS, AND RISK ASSESSMENT OF PESTICIDES IN THE ENVIRONMENT**		
	Multigenerational exposure of the earthworm *Eisenia andrei* to two insecticides | **WILLIAM MARTIN**, University of Guelph	Water monitoring for pesticides pilot program | **JANICE VILLENEUVE**, Health Canada	Investigating the potential toxicity of copper nanoparticles from agricultural run-off on *Daphnia magna* | **FLEUR ISSAC**, University of Alberta
SHAW 210	**LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT**		
	Applicability of partial ultrafiltration for determination of critical metals complexation with natural organic matter investigated by HPSEC-ICP-MS | **OCÉANE HOURTANÉ**, INRS-ETE	Lanthanum speciation and bioavailability in aqueous media containing natural organic matter | **MARIE-HÉLÈNE BRUNET**, Université de Montréal	Effects of Nd, Pr, and Y: bioaccumulation studies | **CELINE DO**, Wilfird Laurier University
SHAW 211	**FROM LAB TO NATURE: APPLYING ENVIRONMENTAL RELEVANCE TO STANDARDIZED TOXICITY TESTING**		
	Twin Lakes *Hyalella azteca* 42-day survival, growth and reproduction toxicity testing of Chalk River Laboratories wetland sediment | **SAM JARRON**, Canadian Nuclear Laboratories	Ecotoxicity assessment of petroleum-coke-treated Oil Sands Process-Affected Water, Part 1: sublethal toxicity assessment | **JAMES ELPHICK**, Nautilus Environmental	Ecotoxicity assessment of petroleum-coke-treated Oil Sands Process-Affected Water, Part 2: mesocosm assessment | **MARTIN DAVIES**, Hatfield
SHAW 212	**POLLUTION'S POWER PLAY: EFFECTS OF CONTAMINANTS ON METABOLISM AND ENERGETICS**		
	Venlafaxine alters mitochondrial respiration of zebrafish brains, in part due to mitochondrial microRNA regulation | **KARYN ROBICHAUD**, University of Waterloo	Naphthenic acids contribute to oxidative stress by eliciting the emission of reactive oxygen species in mitochondria | **ZAHRA KALVANI JAHROMI**, University of Prince Edward Island	The role of animal energetics in contaminant body burdens and biomarkers of health | **SHANE de SOLLA**, Environment and Climate Change Canada

	14:15	14:30	14:45
OTTAWA SALON	**PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS**		
	The proof is in the poop: Assessing microplastics bioaccumulation and toxicity in freshwater macroinvertebrates | **QUINN ALLAMBY**, McMaster University	You are what you eat: microplastic accumulation in *Planorbella pilsbryi* | **EMILIE MONTREUIL STRUB**, University of Waterloo	Measuring ingestion of microfibers in different tissues of a freshwater mussel | **YARYNA KUDLA**, University of Guelph
SHAW 209	**EXPOSURE, EFFECTS, AND RISK ASSESSMENT OF PESTICIDES IN THE ENVIRONMENT**		
	An assessment of the toxicity of pesticide mixtures in periphyton from agricultural streams to the mayfly *Neocloeon triangulifer* | **MOIRA IJZERMAN**, University of Guelph	Bioaccumulation and physiological/behavioural effects of a common pesticide mix on pond snails | **JARED SPARR**, Bishop's University	Assessing agricultural pesticides risks for aquatic life: potential health effects of a glyphosate-based herbicide (GBH) on *Elliptio complanata* at environmental concentrations | **YANNICK ARNOLD NOMBRÉ**, UQAM
SHAW 210	**LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT**		
	Toxic effects of rare earth elements cerium, neodymium, and europium both as single and ternary mixture exposures on tomato and durum wheat | **BEVERLEY HALE**, University of Guelph	Assessing the potential risk of lithium mining environments using mineralogy and geochemistry | **CARRIE RICKWOOD**, Natural Resources Canada	Chronic lithium toxicity on the fingernail clam (*Pisidium dubium*) | **AWA MAMEY MALIKA**, University of Ottawa
SHAW 211	**FROM LAB TO NATURE: APPLYING ENVIRONMENTAL RELEVANCE TO STANDARDIZED TOXICITY TESTING**		
	Safety in numbers? Manipulating the social context in the standardized LC50 toxicological assessment | **SIENNA OVERDUIN**, University of Alberta	Are standard test species still relevant? A comprehensive assessment of *Daphnia magna* reared in laboratory and wild environments and their responses to anthropogenic contaminants | **AARON BOYD**, University of Alberta	Discussion Block
SHAW 212	**POLLUTION'S POWER PLAY: EFFECTS OF CONTAMINANTS ON METABOLISM AND ENERGETICS**		
	Understanding darter (*Etheostoma spp.*) interspecific energetic responses to climate-induced temperature changes | **ALLISON WEBER**, University of Waterloo	Rearing temperature influences the development and function of the eye and the behavioural performance of yellow perch larvae | **ANDREW THOMPSON**, McMaster University	The effect of rearing temperature on the cardiometabolic development of yellow perch (*Perca flavescens*) | **MELLISSA EASWARAMOORTHY**, McMaster University

WEDNESDAY AFTERNOON Platform Presentations - Block 3

	15:30	15:45	16:00
OTTAWA SALON	**PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS**		
	Transcriptomic analysis of developing wood frog larvae following continuous exposure to a microplastic mixture | **DREW THOMPSON**, University of Waterloo	The effects of a microplastic mixture on the growth and development of Wood frogs (*Rana sylvatica*) in an outdoor mesocosm experiment | **SAM GENE**, Queen's University	Microplastics in a chronosequence of biosolid-amended agricultural soils in Southern Ontario | **HARRIET WALKER**, Trent University
SHAW 209	**EXPOSURE, EFFECTS, AND RISK ASSESSMENT OF PESTICIDES IN THE ENVIRONMENT**		
	Toxicity of individual and combined effect of mefenpyr di-ethyl safener and its co-herbicide, fenoxaprop-p-ethyl, to early life stages of zebrafish | **OLUWABUNMI FEMI-OLOYE**, University of Saskatchewan	Water temperature influences the sensitivity of larval sea lamprey (*Petromyzon marinus*) to lamprey-specific pesticides | **DEJANA MITROVIC**, University of Waterloo	Examining effects of neonicotinoids singly and in mixtures using salmonid cell lines | **ANIA BULA**, University of the Fraser Valley
SHAW 210	**LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT**		
	Can skin-associated mucous chemically protect against low-level mercury in teleost fish? | **ASHLEY JAMES**, University of Saskatchewan	Metals impact fathead minnow's ability to regulate oxygen | **NATALIE NYKAMP**, Wilfird Laurier University	Multiple stressors: how metals impact a fish's ability to regulate oxygen | **ERIN M. LEONARD**, Wilfird Laurier University
SHAW 211	**'OMICS IN ECOTOXICOLOGY: PREDICTIVE AND DIAGNOSTIC APPLICATIONS**		
	Characterising transcriptional responses to three antimicrobial compounds in early life stages of rainbow trout using the EcoToxChip | **MAWULI AMEKOR**, University of Saskatchewan	Beyond the prescription: unveiling the disturbing effects of venlafaxine on aquatic life | **LOUIS PFEIFER**, University of Waterloo	Comparison of *Daphnia magna* and Japanese medaka exposure to pharmaceuticals via targeted mass spectrometry (MS)-based metabolomics | **ERICO OLIVEIRA PEREIRA**, University of Toronto
SHAW 212	**THE EFFECTS OF CONTAMINANTS IN A CHANGING CLIMATE**		
	Acute thermal stress impacts cardiac function in diploid and triploid chinook salmon (*Oncorhynchus tshawytscha*) | **IVAN CADONIC**, University of Waterloo	Degrees of change: warmer water exacerbates the immediate and latent effects of crude oil exposure on developing salmon | **DERIN CALIK**, University of Guelph	The impacts of carbamazepine and temperature on the diurnal and nocturnal behaviour of yellow perch larvae | **ANDREW THOMPSON**, McMaster University
	16:15	**16:30**	**16:45**
OTTAWA SALON	**PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS**		
	Your #2 is my #1: assessing the microplastic content of biosolids and agricultural fields | **NICHOLAS LETWIN**, University of Guelph	Label-free localization and imaging of plastic uptake using vibrational microspectroscopy on histological sections | **JUN-RAY MACAIRAN**, McGill University	Unveiling nanoplastic biouptake in the environment: advancing environmental analysis through label-free localization and identification | **JUN-RAY MACAIRAN**, McGill University
SHAW 209	**EXPOSURE, EFFECTS, AND RISK ASSESSMENT OF PESTICIDES IN THE ENVIRONMENT**		
	Characterizing the cytotoxic and molecular effects of environmentally relevant pesticides on human Caco-2 and HepG2 cell lines | **IRIS (KE) XU**, McGill University	Cytotoxic and transcriptomic effects of environmentally relevant pesticides exposed to RTgill-W1 cells | **SOPHIE EMBERLEY-KORKMAZ**, McGill University	The environmental health burden of pesticides in the United States | **ALAN KOLOK**, University of Idaho
SHAW 210	**LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT**		
	Subchronic impacts of copper and a copper, cadmium, and zinc mixture on the liver and gill proteomes of developing rainbow trout (*Oncorhynchus mykiss*) | **MICHAEL MCKAY**, Simon Fraser University	Interactions of trace metals on heart mitochondrial reactive oxygen species metabolism | **PIUS TETTEH**, University of Prince Edward Island	Bridging the gap: estimating heavy metals uptake into native vegetation consumed by Indigenous peoples and wildlife | **ELENA LEGRAND**, Stantec Consulting Ltd.
SHAW 211	**'OMICS IN ECOTOXICOLOGY: PREDICTIVE AND DIAGNOSTIC APPLICATIONS**		
	Mucus as a non-lethal alternative: proteomic evaluation of fathead minnows exposed to nutrient loadings | **KRISTA ROBERTSON**, University of Manitoba	Understanding the knowledge gaps in using toxicogenomic approaches for assessing aquatic ecosystem health | **NEFERTITI ROLDÁN WONG**, University of Ottawa	How does tertiary treated municipal effluent affect hepatic transcriptome in longnose dace (*R. cataractae*) caged under semi-controlled conditions in artificial raceways? | **PATRICIA MARJAN**, University of Calgary
SHAW 212	**THE EFFECTS OF CONTAMINANTS IN A CHANGING CLIMATE**		
	Effects of elevated temperatures and exposure to atrazine on the health, immunity, and locomotor performance of larval northern leopard frogs (*Lithobates pipiens*) | **MELODY GAVEL**, Carleton University	Combined effects of manganese and thermal stress on the metabolic capacities of Arctic charr (*Salvelinus alpinus*) | **PATRICE COUTURE**, INRS	Does temperature modify the impact of metals on olfactory-mediated behaviours in salmonids? | **JOANNA WILSON**, McMaster University

Environmental DNA (eDNA): research and applications to assess biodiversity and supporting aquatic ecosystem health management
Caren Helbing (University of Victoria) | Gerald Tetreault (ECCC)

Block 1: 09:00 - 10:00 | Block 2: 10:30 - 11:45

Ecotoxicology of tire and road wear particles and related contaminants – where are we 3 years after the identification of 6PPD-quinone?
Sarah Marteinson (Fisheries and Oceans Canada) | Markus Brinkmann (University of Saskatchewan)

Block 1: 09:00 - 10:00 | Block 2: 10:30 - 11:45

Exposure, accumulation and effects of radionuclides
Claude Fortin (INRS) | Richard Goulet (Natural Resources Canada) | Karsten Liber (University of Saskatchewan) | Malcolm McKee (Canadian Nuclear Safety Commission) | Mandy McConnell (Canadian Nuclear Safety Commission) | Catherine Proulx (University of Ottawa) | Edgar Perez (University of Saskatchewan)

Block 1: 09:00 - 10:00 | Block 2: 10:30 - 11:45

THURSDAY Platform Presentations

	09:00	09:15	09:30
OTTAWA SALON	**ENVIRONMENTAL DNA (eDNA)**		
	A validated and optimized environmental DNA detection assay for Arctic grayling - a Species of Special Concern | **MELISSA MISUTKA**, University of Alberta	Comparative analysis of eDNA barcoding and conventional monitoring methods to detect amphibians in Southern Ontario vernal pools | **CAILYN ZAMORA**, University of Waterloo	Application of novel eDNA methods to determine distribution and estimate biomass of oolichan (*Thaleichthys pacificus*) | **MICHAEL ALLISON**, University of Victoria
SHAW 209	**ECOTOXICOLOGY OF TIRE AND ROAD WEAR PARTICLES AND RELATED CONTAMINANTS**		
	Toxicity of 6PPD-quinone across fishes of commercial, cultural, and ecological importance | **MARKUS HECKER**, University of Saskatchewan	Comparison of the toxicity of 6PPD-quinone to early life stage rainbow trout and lake trout | **CATHERINE ROBERTS**, University of Saskatchewan	Changes in the blood chemistry of Brook trout (*Salvelinus fontinalis*) and Atlantic salmon (*Salmo salar*) after acute exposures to 6PPD-quinone | **DANIELLE PHILIBERT**, Huntsman Marine Science Centre
SHAW 210	**EXPOSURE, ACCUMULATION, AND EFFECTS OF RADIONUCLIDES**		
	Comparison of radium-226 separation methods based on chromatographic and extraction resins for its determination by ICP-MS in environmental matrices | **LAURIE MARTIN**, Université Laval	Accumulation of Radium 226 in three microalgal species and its effect of growth | **FLAVIE DESREAC**, INRS-ETE	Chronic radium-226 toxicity to and bioaccumulation in the aquatic invertebrate *Daphnia magna* | **CHARLOTTE LACROIX-DURAND**, University of Saskatchewan
	09:45	**10:30**	**10:45**
OTTAWA SALON	**ENVIRONMENTAL DNA (eDNA)**		
	Investigating key validation steps to optimize eDNA metabarcoding assays targeting rRNA genes of amphibians found in the Grand River watershed | **NATHANAEL HARPER**, University of Waterloo	Targeted qPCR-based workflow for detecting fish sedimentary DNA in aquatic systems | **MARK LOUIE LOPEZ**, University of Victoria	The use of eDNA in concert with conventional electrofishing in streams adjacent to agricultural activities in the Lake Erie basin | **GERALD TETREAULT**, Environment and Climate Change Canada
SHAW 209	**ECOTOXICOLOGY OF TIRE AND ROAD WEAR PARTICLES AND RELATED CONTAMINANTS**		
	Comparative analysis of cardiometabolic effects of 6PPD-quinone on juvenile salmonids | **SUMMER SELINGER**, University of Saskatchewan	Unraveling the molecular mechanism of 6PPD-Quinone toxicity using whole transcriptome analysis in lake trout | **JUNYI LIN**, University of Saskatchewan	6PPD quinone poses a low risk to freshwater invertebrate populations | **JACK SALOLE**, University of Guelph
SHAW 210	**EXPOSURE, ACCUMULATION, AND EFFECTS OF RADIONUCLIDES**		
	Radium-226 water quality guidelines 14-day water-only toxicity test with Twin Lakes *Hyalella azteca* | **FRANCESCA FARROW**, Canadian Nuclear Laboratories	Chronic toxicity of radium-226 to fingernail clams | **CATHERINE PROULX**, University of Ottawa / Kilgour and Associates Ltd.	Radium-226 toxicity to the early life stages of the great pond snail *Lymnaea stagnalis* | **LÉNA GUIMARD**, INRS
	11:00	**11:15**	**11:30**
OTTAWA SALON	**ENVIRONMENTAL DNA (eDNA)**		
	A data management solution for eDNA research, from field to lab | **ALEX BORISENKO**, University of Guelph	Inhibition of RT-qPCR and RT-dPCR of SARS-CoV-2 RNA and fecal indicators in wastewater-based surveillance | **HADI A. DHIYEBI**, University of Waterloo	Wastewater-based surveillance of SARS-CoV-2: lessons learned in sewersheds that can be applied to watersheds | **HEATHER IKERT**, University of Waterloo
SHAW 209	**ECOTOXICOLOGY OF TIRE AND ROAD WEAR PARTICLES AND RELATED CONTAMINANTS**		
	Acute Toxicity of 6PPD-quinone on *Planorbella pilsbryi* and *Megalonaias nervosa* | **SPENCER HANG**, University of Guelph	Identifying and characterizing tire-related chemical (6PPD-quinone) toxic hotspots in salmon habitat in British Columbia, Canada | **TANYA BROWN**, Fisheries and Oceans Canada	Interlaboratory study on analytical methods for aqueous 6PPD-quinone – on the path towards comparability | **SARAH MARTEINSON**, Fisheries and Oceans Canada
SHAW 210	**EXPOSURE, ACCUMULATION, AND EFFECTS OF RADIONUCLIDES**		
	Low radium-226 doses enhance growth and condition in rainbow trout (*Oncorhynchus mykiss*) fry at swim-up | **EDGAR PEREZ**, University of Saskatchewan	Baseline environmental monitoring program for a deep geological repository | **STACEY FERNANDES**, CanNorth	Exposure of nearshore Great Lakes biota to transient releases of 137Cs | **DAVID J. ROWAN**, Canadian Nuclear Laboratories

TUESDAY Posters

NEW METHODS AND NOVEL APPROACHES FOR ASSESSING AND MONITORING ENVIRONMENTAL CONTAMINANT MIXTURES

T1	Method development and application of walleye as a test species to evaluate the toxicity of constituents of concern from Alberta | **JAMES ELPHICK**, Nautilus Environmental	**T2**	The influence of salinity on the acute lethality of select metals and other deleterious substances to two marine invertebrates | **MARRIAH GREY**, Bureau Veritas
T3	A high throughput in vitro assay using ultraplex RNA sequencing to derive transcriptomic points of departure | **KRITTIKA MITTAL**, McGill University	**T4**	Prospective optimization, evaluation, and application of *in vitro* methods to study biotransformation of organic chemicals in birds | **MATTHEW SCHULTZ**, University of Saskatchewan
T5	High-throughput transcriptomic and phenotypic assessments to characterize hazards for per-and poly-fluoroalkyl substances (PFAS) in zebrafish embryos | **HYOJIN LEE**, University of Ottawa	**T6**	Developing non-lethal techniques for identifying endocrine disruption in fishes | **EMILY KENNEDY**, University of Saskatchewan
T7	The effects of hypoxia on fathead minnow behaviour and 'omics | **RAINA HUBLEY**, Ontario Tech University	**T8**	Impact of irradiated and non-irradiated very low sulphur fuel oils on the righting behaviour of common periwinkle snails (*Littorina littorea*) | **DANIELLE PHILIBERT**, Huntsman Marine Science Centre
T9	Dietary exposure of stormwater contaminants in biofilm to two freshwater macroinvertebrates | **GAB IZMA**, University of Waterloo	**T10**	Aquatic mesocosms for environmental research: insights from three studies in six years | **BRUCE KILGOUR**, Kilgour & Associates Ltd.
T11	The effects of contaminants on the taxonomic composition of micro-meiofauna present in biofilms | **EUGÉNIE GARDEBLED**, INRS-ETE	**T12**	Refinement of soil nitrification assessment procedure using genomics tools | **AJITH DIAS SAMARAJEEWA**, Environment and Climate Change Canada
T13	Transcriptomic points of departure using EcoToxChips: a case study with early-life stage rainbow trout exposed to ethinyl estradiol for 24 hrs | **EMILY BOULANGER**, McGill University	**T14**	The use of japanese quail EcoToxChips to improve the understanding of the mechanism(s) of action of hexabromocyclododecane (HBCD) in early-life stage embryos | **EMILY BOULANGER**, McGill University
T15	The use of japanese quail EcoToxChips to improve the understanding of the mechanism(s) of action of ethinyl estradiol (EE2) in early-life stage embryos | **EMILY BOULANGER**, McGill University		

GENERAL ECOTOXICOLOGY: SOIL, SEDIMENT, WATER, AIR, AND BIOTA

T16	Characterising the environmental fate and behaviour of diluted bitumen within freshwater systems | **SCOTT HEPDITCH**, INRS	**T17**	Characterization of chloride exposure levels and ecological risk in the surface waters of Manitoba, Canada | **BRAEDON HUMENIUK**, University of Manitoba
T18	The role for amphibians in monitoring ecosystem health and environmental change | **SARAH YOUNG**, Environment and Climate Change Canada	**T19**	Can analysis of sediments, vegetation, and waters provide differentiation between the sources of anthropogenic and natural contamination in the Tambo River Basin in Southern Peru? | **MACKENZIE HOBBS**, Laurentian University
T20	Impacts of land use and ultraviolet radiation on floodplain zooplankton: an integrative ecotoxicity assay with *Daphnia magna* | **SHAHIN BADESAB**, Université du Québec à Trois-Rivières	**T21**	Using a passive dosing system to assess the toxicity of individual aromatic compounds to intertidal bivalves | **VICTORIA LOOR**, University of Guelph
T22	Environmental risks of arsenic in irrigated agricultural areas with abnormal arsenic levels in waters from the Paracatu River (MG), Brazil | **MARINA MONTEIRO FEITOSA**, University of Guelph	**T23**	Arsenic speciation in freshwater fish: a systematic review with implications for monitoring and research | **ADAM LEPAGE**, Laurentian University
T24	Evaluating the effect of wastewater treatment plant upgrades on contaminants of emerging concern (CECs) | **LESLIE BRAGG**, University of Waterloo	**T25**	Using narcotic and phototoxic target lipid models to develop water quality guidelines for polycyclic aromatic hydrocarbons (PAHs) | **JANET CERMAK**, Environment and Climate Change Canada
T26	nZVI in the field: remediating mine soils contaminated with a metal(loid) mixture | **EMILY BOWYER**, University of Guelph	**T27**	Determining the impacts of an aquatic copper exposure to northwestern salamander larvae | **BLAKE DANIS**, Simon Fraser University
T28	Derivation of a nickel benchmark for the protection of aquatic environments using species sensitivity distributions | **JORGELINA MUSCATELLO**, Lorax Environmental Services Ltd.		

WILDLIFE ECOTOXICOLOGY: EXPOSURE, ACCUMULATION, AND EFFECTS			
T29	Avian ecotoxicology effects assessment of resident and migratory breeding waterbirds at oil sands tailings ponds in northern Alberta | **HANNA ULMER**, University of Saskatchewan	**T30**	Behavioural ecotoxicology of Canadian leeches: species-specific reactions to UV light and to a pollutant | **DAVID VERGOTE**, University of Alberta
T31	Mercury concentrations in marine bird eggs in Lake Melville before and after flooding of the Muskrat Falls hydroelectric reservoir | **MARGARET ENG** Environment and Climate Change Canada	**T32**	The importance of riparian vegetation in agricultural ditches for the development and survival of northern leopard frog (*Lithobates pipiens*) tadpoles | **JUSTIN MARCHAND**, University of Ottawa / Environment and Climate Change Canada
T33	Assessing the health of whooping crane migratory wetlands in the Alberta oil sands region | **LUKAS MUNDY**, Environment and Climate Change Canada	**T34**	Assessing the health of wood frogs and boreal wetlands in the Athabasca oil sands region of northern Alberta | **LUKAS MUNDY**, Environment and Climate Change Canada
EMERGING CONTAMINANTS IN WASTEWATER EFFLUENTS: EXPOSURE, EFFECTS, AND POSSIBLE ENVIRONMENTAL RISK			
T35	Toxicological evaluation of emerging antibacterial compounds using the Microtox® test system | **JULEANNE FLORES**, University of Saskatchewan	**T36**	Screening-level assessment of the ecological impacts of pharmaceuticals and personal care product contamination to aquatic and terrestrial systems at Alaksen National Wildlife Area | **JEFFREY LAM**, Simon Fraser University
T37	Are early-life stage rainbow trout (*Oncorhynchus mykiss*) sensitive to benzalkonium chloride, an emerging antimicrobial compound of concern? | **EVAN KOHLMAN**, University of Saskatchewan	**T38**	Transcriptomic changes at the reproductive level of catfish (*Trichomycterus areolatus*) associated with sewage effluents in greater Santiago, Chile. | **DAVID RODRÍGUEZ**, Universidad de Valparaíso
T39	Transfer of aquatic PPCP contaminants to terrestrial food webs by emergent invertebrates exposed to WWTP effluent | **JOHN FAST**, McMaster University	**T40**	Quaternary ammonium compounds (QACs) in Canadian wastewaters and biosolids, and the potential impact of COVID-19 | **KATRINA SULLIVAN**, Environment and Climate Change Canada
T41	Development of the optimal extraction method of chiral pharmaceuticals from rainbow darter (*Etheostoma caeruleum*) | **SARAH KOWALCZYK**, University of Waterloo	**T42**	Estimation of the drugs of abuse consumption in the southern Ontario via wastewater-based surveillance | **DIANA CARDENAS-SORACA**, University of Waterloo
TACKLING THE CHALLENGE OF UNDERSTANDING ECOLOGICAL EFFECTS OF PER AND POLYFLUOROALKYL SUBSTANCES			
T43	Potential impacts of climate change on the levels of perfluorooctane sulfonate in the Beaufort Sea Shelf food web and implications for human health risk | **ELIZABETH WALLACE**, University of Ottawa	**T44**	Proteomic analysis of short-chain perfluorinated alkyl substance (PFAS) exposure in fathead minnows (*Pimephales promelas*) | **CRISTINA HENRIQUES**, Ontario Tech University
T45	Characterization of the replacement PFAS, perfluoroethylcyclohexane sulphonate (PFECHS) and perfluorobutane sulphamide (FBSA) in vitro individually and in mixture with perfluorooctane sulponate (PFOS) | **HANNAH MAHONEY**, University of Saskatchewan	**T46**	Derivation of Canadian environmental quality guidelines for perfluorooctanoic acid (PFOA) | **JANET CERMAK**, Environment and Climate Change Canada
MINING AND THE ENVIRONMENT			
T47	Monitoring to management: a framework for integrating and interpreting complex aquatic monitoring data | **GIOVANNA DIAZ**, Teck Coal Limited	**T48**	Application of novel approach to evaluating acute lethality limits for sulphate | **BREDA RAHMANIAN**, WSP Canada Inc.
ADVANCEMENTS IN BIOGEOCHEMISTRY, ENVIRONMENTAL FATE, AND ECOTOXICOLOGY AND MANAGEMENT OF SELENIUM			
T49	Selenium bioaccumulation in lab-cultured and field-collected *Daphnia pulex* via dissolved and dietary exposure routes | **CATHERINE DAVILA-ARENAS**, University of Saskatchewan	**T50**	Characterization of lab maintained periphyton from lotic systems in British Columbia using eDNA metabarcoding and selenium uptake kinetics | **WILLIAM MUZYKA**, University of Saskatchewan

WEDNESDAY Posters

PLASTIC POLLUTION IN TERRESTRIAL AND AQUATIC ENVIRONMENTS			
W1	Sorption of three pesticides to weathered and pristine LDPE and PLA microplastics | **LIAM O'HARA**, University of Guelph	**W2**	The role of terrestrial isopods in macroplastic breakdown: microplastic formation and potential impacts on smaller organisms | **CHRISTOPHER MUSGRAVE**, University of Guelph
W3	Microplastic ingestion by aquatic-emergent insects and an aerial insectivore; observational and experimental field studies | **JESSIE WILSON**, Acadia University	**W4**	The impacts of microplastics on physiology, behaviour, and survival of a freshwater gastropod, *Planorbella pilsbryi* | **ANA STRBAC**, McMaster University
W5	Impact of microplastics to invertebrate survival and reproduction in a field soil: direct amendment and biosolid application | **JESSICA VELICOGNA**, Environment and Climate Change Canada	**W6**	Development of a blocking primer to study the effects of microplastics on the wood frog tadpole skin-associated bacterial microbiome | **DREW THOMPSON**, University of Waterloo
W7	Multi-level responses of benthic macroinvertebrates to experimental microplastic pollution in a boreal lake | **NATASHA CORREA BRAGA CAMARA A NEVES**, Queen's University	**W8**	Fate and effect of microplastics on freshwater zooplankton in a whole-lake addition experiment | **MADELEINE MILNE**, University of Manitoba
ECOTOXICOLOGY OF TIRE AND ROAD WEAR PARTICLES AND RELATED CONTAMINANTS			
W9	Use of toxicity identification techniques to isolate causes of toxicity in stormwaters in British Columbia: case studies with zinc and 6PPD-Q | **JOSH BAKER**, Nautilus Environmental	**W10**	Investigating environmental sources of the toxic tire-derived chemical 6PPD-Q | **LELAND BRYSHUN**, University of Saskatchewan
W11	A histological assessment of 6PPD-quinone exposed juvenile Chinook and Coho salmon | **BONNIE LO**, Simon Fraser University	**W12**	Sublethal effects of 6PPD and 6PPD-quinone on early life stages of largemouth bass (*Micropterus salmoides*) and insights into mechanisms of toxicity | **KATRYNA SEABROOK**, Queen's University
LATEST ADVANCES IN FATE AND EFFECTS OF METALS IN THE NATURAL ENVIRONMENT			
W13	Proteomic profiles of kidney and liver tissues of rainbow trout (*Oncorhynchus mykiss*) exposed to low concentrations of waterborne nickel | **KYLEE RONNENBERG**, Ontario Tech University	**W14**	Ecological risk classification of inorganic substances | **RACHEL BOUWHUIS**, Environment and Climate Change Canada
W15	Rare earth elements: toxicological assessment of neodymium (sulfate salt and organometallic) in boreal soil | **PATRICK BOYD**, Environment and Climate Change Canada	**W16**	Iron spiked sediment 42-day survival, growth and reproduction toxicity testing with Twin Lakes *Hyalella azteca* | **MARILYNE STUART**, Canadian Nuclear Laboratories
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