

Emerging Technologies to Empower Effective Inland Lake Stewardship

This year's 2021 "Winter Water Quality Symposium" features revolutionary applications of emerging technologies using innovative methodologies for water quality analysis. Two specific tools, qPCR and Aerial Drone Imaging, will be showcased for their value and versatility at providing high resolution and statistical information on the biological forces impacting water quality. In addition, ROV applications, GIS, innovations in education and outreach and "secrets" of fundraising will be presented. Everyone seeking better ways to address water quality issues on their lake will find value in this symposium. Plan to attend!

When: Feb 26, 2021 08:30 AM Eastern Time (US and Canada)

Register in advance for this webinar:

https://us02web.zoom.us/webinar/register/WN_Fz9xFU0kQPuD9BKR-nsH1Q

After registering, you will receive a confirmation email containing information about joining the webinar.

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| 8:30 am | Welcome & Opening Remarks – Rob Karner, Watershed Scientist, Glen Lake Association |
| 8:45 am | Session 1 - <i>qPCR Basics and Innovative Applications Introduction</i>
Dr. Patrick Hannington, University of Alberta |
| 9:00 am | Session 2 – <i>Detecting Human Waste Influence on Surface Water Using qPCR</i>
Kelsey Froelich, University of Alberta (MSc) |
| 9:30 am | Session 3 – <i>Identifying Schistosome Community Structure Using qPCR</i>
Brooke McPhail, University of Alberta (MSc) |
| 10:00 am | Session 4 – <i>Remote sensing Using Arc GIS Technology</i>
Dan Ariza, (MSc) Physical Geography, GIS and Remote Sensing |
| 10:30 am | Session 5 – <i>New Swimmer's Itch Discoveries and Next Steps</i>
Ron Reimink, Freshwater Solutions |
| 11:00 am | Session 6 – <i>eDNA Applications for Lake Monitoring and AIS Assessment</i>
Dr. Sydney Rudko, Public Health Agency of Canada |
| 11:30 am | Lunch Break |
| 12:00 pm | Session 7 - <i>Aerial Drone Basics and Innovative Applications</i>
Dennis Wiand, Zero Gravity |

12:30 pm **Session 8** – *Comprehensive Shoreline Survey Using Drones to Document, Track and Target Shoreline Conditions and Needs*
Rob Karner, Watershed Scientist, Glen Lake Association

1:00 pm **Session 9: Technology Briefs**

1. *HABs: Using Technology to Assess a Growing Threat*
Dr. Patrick Hanington, University of Alberta
2. *Sharing What We Learn: Newer, More Powerful Communication Tools*
Tricia Denton, Glen Lake Association
3. *Combining Technology & Fundraising*
Rob Karner, Glen Lake Association

1:40 pm **Closing Remarks** – *Partnerships for Prevention, Protection and Remediation*
Tricia Denton, Watershed Guardian Ambassador, Glen Lake Association

2:00-4:00 pm Breakout Discussion Groups

1. For *GIS, Remote Sensing, and Communication* topics remain on original zoom meeting.
2. For all things *qPCR/eDNA* join the following zoom meeting link starting at 2pm:
<https://us02web.zoom.us/j/87621672465?pwd=WnJiYzR1WmlyZnFXajBmbitaahZvQT09>
Meeting ID: 876 2167 2465
Passcode: GLA