



MGUG

MANITOBA GIS USER GROUP

2024 Fall Conference

The Manitoba GIS User Group (MGUG) is a group of geomatics professionals and interested individuals using or supporting the use of Geographic Information Systems (GIS) for spatial data management, analysis, and visualization. Formed to facilitate communication between people working in all areas of GIS, the User Group meets to allow its members to learn more about current activities and technologies within the industry and to network with their peers.

October 29th, 2024 Conference

Hilton (Winnipeg Airport)

1800 Wellington Ave, Winnipeg MB

Manitoba GIS User Group
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Winnipeg, Manitoba,
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<http://mb-gis-user-group.slack.com/>

Digital copies of this Conference Program are available on the website <https://mgug.ca/conference/>

Land Acknowledgment

On behalf of the Manitoba GIS Users Group, we wish to acknowledge the significance of the land we live in, learn in and use and the importance of this land to the People of Manitoba. We recognize that we are gathered on Treaty Territories 1, 2, 3, 4, 5, the ancestral home of the Anishinaabe, Cree, Oji-Cree, Dakota, Dene and Inuit Peoples, and on the traditional homeland of the Métis Nation.



We appreciate the deep connection that Indigenous Peoples maintain with this land and express our respect for their enduring presence, their languages, their cultures, and their rich contributions to our geospatial community. We commit ourselves to understanding and acknowledging the history of this land, and to fostering meaningful partnerships with Indigenous communities as we navigate our work in geospatial technology. By embracing this acknowledgment, we strive to actively contribute to reconciliation and the ongoing journey toward a more equitable and inclusive society for all.



2024 Conference Agenda



2024 FALL CONFERENCE
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Master of Ceremonies: Paige Kowal, Research Biologist at Ducks Unlimited Canada

7:30 AM	Arrival, Registration & Networking
8:30 AM	Robert Belton , MGUG President: MGUG President's Welcome and Land Acknowledgement
8:45 AM	Keynote Speaker: Sibeal McCourt , Ratio.City <i>Canadian Housing Development and the GIS Knowledge Gap</i>
9:45 AM	Featured Speaker: Gordon Goldsborough <i>On the Road to Abandoned Manitoba</i>
10:25 AM	Morning Break (20 min)
10:45 AM	Keynote Speaker: Dr. Paul M. Cooley , NextGen Environmental Research Inc. <i>How Near Real-Time C-Band Radar Images & Mobile Apps Improve Climate Resilience of Communities</i>
11:45 AM	Early Bird Prize + door prize, MGUG Project Award, MGUG Service Award
12:00 PM	Lunch & Networking

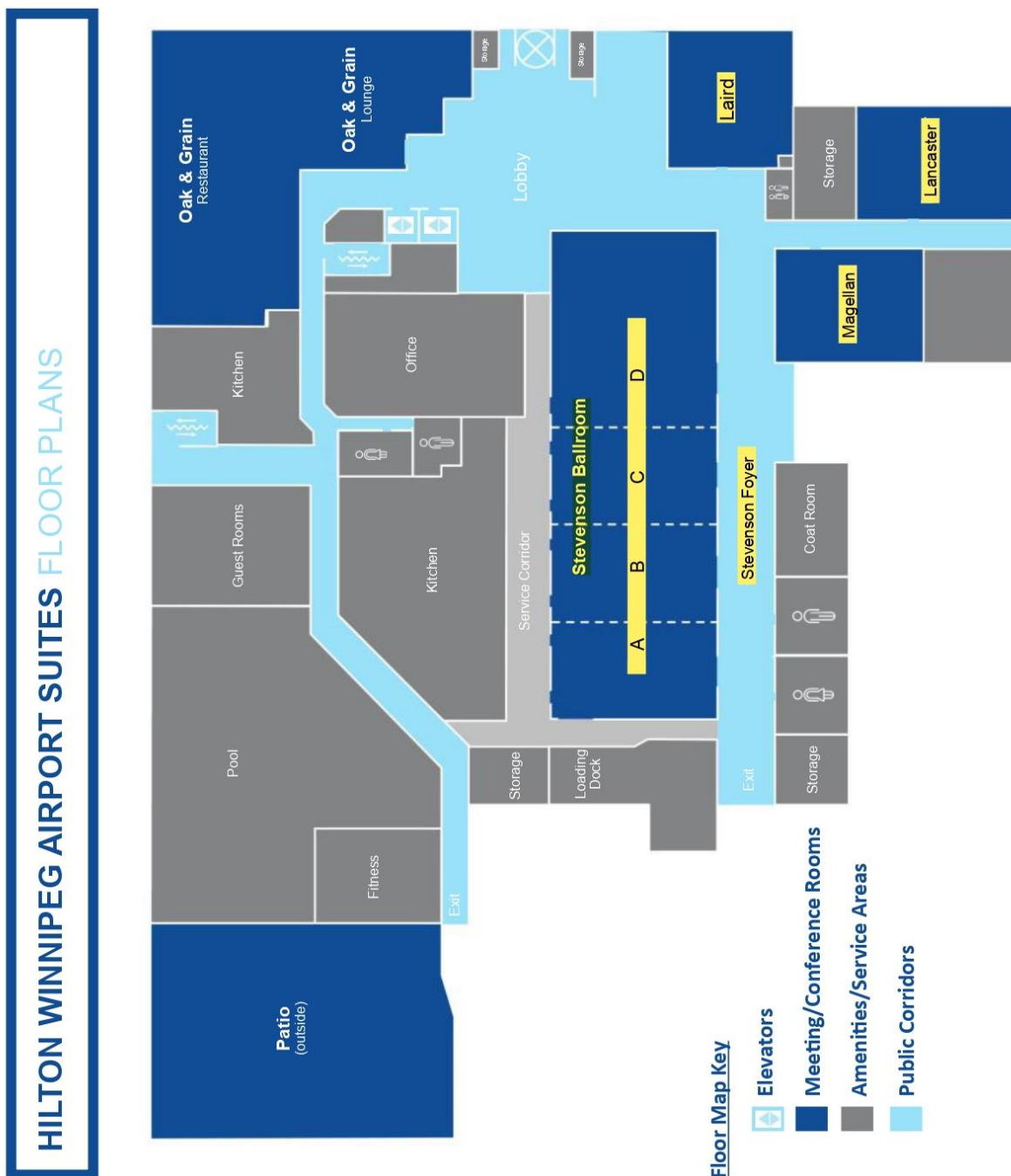
Afternoon Breakout Sessions

20-minute talks followed by 10-minute Question & Answer Period

	Room A	Room B
1:15 PM	Robert Belton , MB Provincial Toponymist <i>An Introduction to Toponymy/MB Place Name quiz</i>	Lauren Sheedy , University of Manitoba <i>Mapping Housing Resources and Services in Winnipeg – Spence Neighbourhood Assoc.</i>
1:45 PM	Dean Hintz , Safe Software <i>Modelling Urban Heat Island Effect in New York City as part of the 2024 OGC Climate and Disaster Resilience Pilot</i>	Melissa Turner , Oceans North <i>From Data to Action: The Role of GIS in Marine Conservation</i>
2:15 PM	Sean Frey , Parks Canada, Onanole Fire Dept. <i>Using OpenAerialMap to Spatially Index and Share Access to Acquired Orthophotography</i>	Gustavo Velasco , University of Winnipeg <i>Student's mobility and learning outcomes: Mapping education inequality in Winnipeg's Inner-City</i>
2:45 PM	Afternoon Break (30 min)	
3:15 PM	Lee Fedorchuk , Manitoba EDITNR <i>Machine Learning and Modeling Peat Sustainability</i>	
4:00 PM	Closing Remarks, door prizes and geo-game prizes	
4:15 PM	Informal gathering at Bistro 1800 (Winnipeg Airport Hilton)	

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Hilton Winnipeg Conference Floor Plan



- ❖ Stevenson Ballroom will serve as the main morning venue & closing speakers
- ❖ Lunch will be BUFFET in the foyer, if you have dietary restrictions check in at the registration desk for details and directions
- ❖ Ballroom will be divided after lunch for the breakouts in A/B and C/D
- ❖ Vendor Booths are located in the Stevenson Foyer



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2024 Manitoba GIS Users Group GIS Service Recognition Award

Our annual awards program highlights those who have gone above and beyond in advancing the field of Geographic Information Systems and Geospatial Technologies.

Through the **GIS Service Recognition**, we honor the dedication, innovation, and impact of our community members.



Mapster McSpatial Cartographer of Chaos

In a surprising twist of fate, it seems that this year, the geomatics community has collectively decided to take a sabbatical from recognizing its own brilliance. The prestigious GIS Service Recognition Award, which celebrates those who have made significant contributions to the field, remains without a recipient. Perhaps our seasoned veterans are simply too modest, or perhaps they're all busy plotting their next big innovation in a secret underground lair. Either way, we're left with an empty podium and a shiny trophy waiting for its rightful owner. Let's hope next year brings forth a wave of nominations as inspiring as the geospatial solutions we strive to create.



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2024 Manitoba GIS Users Group Outstanding Project Award

Within MGUG, we believe in recognizing and celebrating the exceptional contributions made by individuals and teams in the geomatics community.

Through the **Outstanding Team or Project Award**, we honor the dedication, innovation, and impact of our community members.



Project Title: *Mapocalypse Now; Zombie Network Analysis* Participants: Zombie Survival Cartographers (Paige Turner-Map, Lance Longitude & Maya Cartographer)

As for the Outstanding Project or Team Award, it appears that all of our collaborative geniuses have decided to keep their groundbreaking projects under wraps this year. Could it be that every GIS team is so engrossed in their work that they forgot to submit their applications? Or perhaps they're all secretly competing in an epic geospatial showdown, and we just haven't been invited. Whatever the reason, we eagerly await the day when these unsung heroes step into the spotlight and share their remarkable achievements with the world. Until then, we'll keep our award polished and ready for the next team that dares to claim it.

Keynote Speakers

Sibeal McCourt, Ratio.City :

Canadian Housing Development and the GIS Knowledge Gap

Sibeal is the Data Manager at Ratio.City, a division of Esri Canada, an online platform with tools to help municipal planners and housing suppliers address the housing crisis, through access to centralized data and GIS analysis. She has held multiple roles that leveraged GIS and data to address housing development and sales. She holds a PhD in Geography and a Master's in Urban Planning, bringing a unique blend of expertise in the fields of housing and planning. She is passionate about sustainable and equitable solutions to complex urban problems and is keen on public outreach and science communication.



This presentation will discuss the importance of GIS within all phases of the housing planning and development process in Canada, through both a public and private sector lens. I will discuss some key problems that I've come across, how GIS can help, and what it's like working as a GIS expert in a field that often has low GIS technology adoption.



Dr. Paul M. Cooley, NextGen Environmental Research Inc. :

How Near Real-Time C-Band Radar Images & Mobile Apps Improve Climate Resilience of Communities

NGE is a clean tech firm that specializes in near real-time satellite imaging services and products. The corporation employs at the Ph.D., Masters, and college level with specialization in artificial intelligence and machine learning of radar and optical satellite imagery. NGE is currently developing several new satellite verticals from R&D undertaken by the firm including lake ice monitoring, overland flooding event monitoring, and harmful algal blooms.

This presentation will review the advantages of C band Radar, the near real-time platform we've developed, some Deep Learning experiences, and outcomes for the use cases in lake ice hazards, overland flooding, and algal blooms.



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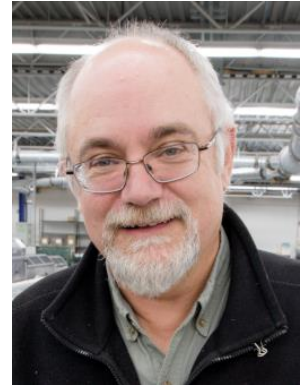
Featured Speakers

Gordon Goldsborough, Manitoba Historical Society :

On the Road to Abandoned Manitoba

I am passionate about Manitoba's history. I have written five books about it, including the Abandoned Manitoba trilogy. I also have a weekly column on CBC Radio, write a weekly column in the Manitoba Co-operator, make videos on YouTube, am an editor of Prairie History magazine, and am the Board Secretary for the Manitoba Agricultural Museum. I am the Head Researcher and Webmaster of the Manitoba Historical Society.

Having spent the past 14 years mapping nearly 10,000 historic sites around Manitoba, about which I have written three best-selling books. Among the places I will talk about in this presentation are underground posts from the Cold War, an enigmatic concrete skeleton, and the original route of the Trans-Canada Highway.



Lee Fedorchuk: Manitoba Government, Forestry and Peatlands Branch :

Machine Learning and Modeling Peat Sustainability

Lee Fedorchuk has worked for the Forestry and Peatlands Branch, in a variety of capacities, for nearly twenty years. In 2018, he became the Branch's Peatlands Program Lead, where he regulates the peat harvesting industry, administers The Peatlands Stewardship Act, and advances peatlands-related research projects, which includes work on improving the province's understanding of the sustainability of peat resources. When not collecting peat depth data, he pursues music, writing, and doing a terrible job at gardening.



Using machine learning methods to produce province-wide datasets for peat depth and peat age, annual rates of peat accumulation, by volume, can be estimated. When these volumes are compared to harvested peat volumes, a fuller understanding of sustainability at the landscape level can be achieved. This presentation will discuss

the peat harvesting industry, The Peatlands Stewardship Act, and how GIS and machine learning allows for an improved assessment of sustainability.



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Breakout Speakers

Robert Belton, MB Provincial Toponymist :

An Introduction to Toponymy/MB Place Name quiz

Robert has worked for the Manitoba Government since 2015, where he began working with GIS and flood information. After a stint at Manitoba Transportation and Infrastructure and Manitoba Emergency Management Organization, he works as the Provincial Toponymist, who maintains a database of official geographical names for the province. His current work is focused on recording traditional Indigenous place names in Manitoba.



Besides their essential role in navigation, place names tell us about the history of places, power structures, and geographical attributes. Robert will give a quick introduction to toponymy (the study of place names) and test your knowledge of Manitoba Toponyms!



Lauren Sheedy, University of Manitoba :

Mapping Housing Resources and Services in Winnipeg

Lauren Sheedy holds a Master of City Planning from the University of Manitoba and a Bachelor of Environmental Studies. Lauren's educational background has provided her with an appreciation for the complex relationship between humans and our environment; something that she draws upon in professional practice. Lauren is currently employed as a Junior Planner at a planning consultant firm where she explores her interest in land use planning and community engagement.



In support of Spence Neighbourhood Association's Indigenous Input in Local Housing Project, which aims to support Indigenous Community Members who are transitioning from home community to living in the city of Winnipeg, a user-friendly web app was created using GIS. This app features a map that is intended to help users locate the various organizations, charities, and businesses that provide housing services and resources within the city of Winnipeg. The housing services and resources included within this map are divided into three categories: Rental Housing, Housing Help & Resources, and Shelter & Housing Programs.



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Dean Hintz, Safe Software :

Modelling Urban Heat Island Effect in New York City as part of the 2024 OGC Climate and Disaster Resilience Pilot

Dean Hintz leads the Strategic Solutions team and serves as the Product Manager for Open Standards at Safe Software. He designs and prototypes data architectures and applications leveraging FME's spatial data transformation platform. As the product manager for open standards, Dean oversees FME's alignment with spatial data standards from organizations like OGC, Building Smart, IETF, W3C, ISO, EU INSPIRE, and NENA NG911. His work also focuses on sectors such as disaster response, environmental management, climate change, aerospace, scientific applications and emerging geospatial areas including GeoBIM, digital twins, and mapping of indoor and underground environments. Dean's expertise extends to building complex data integration and automation systems, and he actively contributes to pilots, working groups, and industry conferences.

Modelling urban heat island effect in New York City as part of the 2024 OGC Climate and Disaster Resilience Pilot.



Melissa Turner, Oceans North :

From Data to Action: The Role of GIS in Marine Conservation

As a marine geographer, Melissa Turner works to conduct geospatial analysis and creates mapping products for Oceans North's campaigns in the Arctic and beyond. She draws on a decade of experience providing GIS services to First Nations in Northern Manitoba and Western Ontario. She has worked as the GIS Lead on many traditional knowledge, land use, and occupancy studies, climate change risk assessment studies and environmental impact assessments. She earned her bachelor's degree in geography from the University of Manitoba, where she focused on the geography of environmental changes and the application of geographic information systems. She is based in Winnipeg, Manitoba.



Geographic Information Systems are essential tools for Oceans North's efforts to protect and manage marine ecosystems. This presentation will demonstrate how GIS is used to analyze ecological patterns, design marine protected areas, and monitor environmental changes. Key applications include sustainable fisheries, habitat mapping, assessing shipping noise impacts on marine mammals, and climate change analysis. The presentation will also highlight the role of GIS in collaborating with Indigenous and coastal communities.

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Sean Frey, Parks Canada, Onanole Fire Dept. :

Using OpenAerialMap to Spatially Index and Share Access to Acquired Orthophotography

Sean has spent over 30 years applying geomatics tools to challenges in national parks. His love of maps, computers and the outdoors morphed into a job that has kept him keen to go to work that whole time. He likes to share ideas with people who share his passions.

In this age of rapidly acquired UAV imagery and orthophotos it can be challenging to keep track of everything. OpenAerialMap is an open platform that allows for easy upload, spatial browsing, automatic tiling, WMS access and seamless integration with OpenStreetMap.



Gustavo Velasco, University of Winnipeg :

Student's mobility and learning outcomes: Mapping education inequality in Winnipeg's Inner-City

Gustavo Velasco is an instructor in the Faculty of Education and History Department of the University of Winnipeg. He uses GIS technology in his historical research in a field known as HGIS. His present research focuses on education inequality in Winnipeg.

My research project focuses on mapping students' mobility in Winnipeg's core area and examining its impact on their education. Specifically, I aim to investigate how changes in addresses and schools influence educational outcomes, with an additional emphasis on conducting a comparative analysis before and after the onset of the COVID-19 pandemic.



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Generous support is what makes our GIS community and education events possible! We can't hold conferences like this, or our Lunch + Learns, or our Networking Nights without our generous sponsors.

We are always excited to have new and returning individuals come and engage with the group!

By sponsoring us you increase your organization's exposure to a diverse audience of 1000+ geomatics professionals, including decision-makers from across Manitoba and Canada throughout the year.



Your contribution helps to make MGUG the meeting place for GIS professionals in our Province.

We invite your company to join a dedicated group of organizations that help support the Manitoba GIS User Group. For more information email us at sponsorship@mgug.ca

We could not do it without you!

2024 Conference Survey

We hope you had a blast at the MGUG Fall Conference. Your feedback is incredibly important to us. It's like the secret sauce that helps us cook up an even more incredible experience for you next time.

Completing the post-conference survey is your chance to be the star of the show. Tell us what you loved, what you didn't, and any crazy ideas you might have for future conferences or events. Your insights help us fine-tune our game and make each event even better.

Rest assured, we don't just collect these survey responses and stuff them in a dusty corner. Nope, we analyze every nugget of information you share, and we use it to shape our future events, ensuring they're tailored to your desires and expectations.

So, take a few minutes, right now, to share your thoughts and make a difference in the next conference and networking events an epic experience. We can't wait to hear from you!

And oh ya!... we are always looking for MGUG Board Members, maybe you don't have the time to commit to being a full time member or you just want to volunteer, we can help you with that too! Drop an email to info@mgug.ca

Survey Link & QR Code (that's right do it now!)

<https://arcg.is/1Lq9z01>



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COLLABORATION, INNOVATION, AND PROFESSIONAL GROWTH IN THE GEOSPATIAL FIELD!

- ORGANIZE WORKSHOPS AND EVENTS TO FOSTER KNOWLEDGE SHARING.
- CREATE OPPORTUNITIES FOR NETWORKING AND COLLABORATION.
- PROMOTE THE USE OF GIS ACROSS VARIOUS SECTORS IN MANITOBA.

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