

CV

TARIQ MUNIR

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PROFESSIONAL SUMMARY

- 2019-2021 As a Postdoctoral Fellow with the Department of Geography & Planning, University of Saskatchewan, Dr. Munir partnered with Beavers to restore stream/river function and adapt to climate change in the Alberta Rocky Mountains.
- 2016-Present As an Adjunct Faculty with the Department of Geography, University of Calgary, Dr. Munir taught undergraduate students, mentored graduate students, and authored or co-authored 25+ publications in reputed journals. Tariq received many positive student reviews of teaching.
- 2015-2016 As a Lead Wetland Engineer with the Department of Environment – Imperial Oil Resources/Exxon Mobil, Tariq developed and completed projects on the reclamation of decommissioned oil well pads in Cold Lake, AB and coordinated the modelling of water treatment wetlands in Fort McMurray, AB.
- 2010-2015 Dr. Munir took pride in completing a PhD in Physical Geography from the Department of Geography, University of Calgary in 2015. Wetland soil biogeochemistry and productivity under climate change scenarios were investigated and modelled for spatial and temporal scales.
- 2002-2009 Obtained a diverse field and laboratory research/coordination experience: As a Graduate Research Assistant with the Department of Renewable Resources, University of Alberta (2009), Tariq supported undergrad and grad students in their greenhouse experiments to restore disturbed ecosystems in the boreal forest. As an Environmental Supervisor / Manager with Shell Canada (2005-2009) and EnviroTest Labs (2002-2004), Tariq gained extensive experience in the management of Environmental sites.
- 1999-2002 As a Technical Services Officer with Engro Chemical Pakistan Ltd., Tariq demonstrated how soils meet or exceed their productivity with balanced fertilization in the field to help sustain food security in Pakistan.

1994-1999 Served in Pakistan as a Research officer or Agricultural Officer to help and advise growers to increase crop production while sustaining soil health.

AFFILIATIONS

2016-Present Adjunct Faculty, Department of Geography, University of Calgary
2019-Dec2021 Postdoctoral Fellow, Centre for Hydrology, Department of Geography & Planning, University of Saskatchewan
2013-2018 Adjunct Assistant Professor, Geology, St. Mary's University Calgary
2018-2019 Mentor (PhD Student), Wetland Ambassador Program, Society of Wetland Scientists, USA
2015-2022 Registered Professional Agrologist, Alberta Institute of Agrologists, Edmonton, AB
2015-Present Member Planning Committee and/or Session Chair, Alberta Soil Science Workshop
2009-2018 Registered Environmental Professional, Environmental Career Organization, Alberta
2009 Graduate Research Assistant, Department of Renewable Resources, University of Alberta

EDUCATION/TRAINING

2019-Dec2021 Postdoctoral Fellow (Wetland Ecohydrology)
Department of Geography and Planning
University of Saskatchewan, SK
Supervisor: Cherie Westbrook
Project: partnering with beavers to restore stream function and adapt to climate change in Alberta Rockies.

2015-2016 Postdoctoral Fellow (Wetland Engineer)
Department of Environment – Oil Sands Development and Research
Imperial Oil Resources, Calgary, AB
Supervisor: Michelle Young
Project: Remote Monitoring of reclaimed/restored wetlands in Cold Lake and treatment function modelling of a treatment wetland in Fort McMurray

2010-2015 PhD, Geography
University of Calgary, AB
Supervisor/committee: Maria Strack, Greg McDermid / Darren Sjogren, Jagtar Bhatti
Thesis title: Peatland Biogeochemistry and Plant Productivity Responses to Field-Based Hydrological and Temperature Simulations of Climate Change

1985-1994 BSc-H & MSc-H, Soil Science
Department of Soil Science
University of Agriculture, Faisalabad, Pakistan

TEACHING EXPERIENCE

2010-Present Sessional Instructor / Adjunct Assistant professor
Department of Geography
University of Calgary, AB

PREPARED & TAUGHT LEC01

- Geog 204 (Global Environmental Change) 2x
- Geog 303 (Introduction to Climate Change)
- Geog 324 (Society and Environmental Change)
- Geog 354 (Social and Cultural Geography)
- Geog 352 (Political, Economic and Urban Geography)
- Geog 310 (Landforms and Soils)
- Geog 326 (Geographies of Canada)
- Geog 415 (Physical Hydrology)
- Geog 413 (Soil Characteristics and Formation)
- Geog 313 (soils and vegetation)
- ENSC 504 (Special Topics in Environmental Science)

MENTORED undergraduate student research/thesis, for example:

- Peatland vegetation functional groups affected by climate change (Emily Kaing, 2013)
- Bog biomass response to lowered water table simulating climate change (Mendel Perkins; 2011-2012)

SPONSORED AND MENTORED international PhD student research/thesis:

- Soil respiration rates at a range of well-pad peatland restoration treatments in the Alberta oil sands region (2018-2019)

PROVIDED FIELD TRAINING: Trained undergraduate and graduate students (individual or group) for hydrological (e.g., water table), biogeochemical (e.g., CO₂, CH₄, DOC, Nutrients), biophysical (e.g., vegetation) and environmental impact measurements across various research sites in the boreal forest in Alberta. In-field soil classification training was also provided to some Geography graduate students at the University of Calgary.

2013-2018 Sessional Instructor / Adjunct Assistant Professor,
Department of Geology
St. Mary's University, Calgary

PREPARED & TAUGHT LEC01

- Geog 381 (Canada: Regional Geography)
- Geog 203 (Human Environment)

RESEARCH/EXPERIENCE

- 2019-2021 POSTDOCTORAL FELLOW
Department of Geography and Planning
University of Saskatchewan, SK
- Reviewed, analyzed, and published multiple interdisciplinary research works related to Rocky Mountain stream restoration functions of beavers and beaver dam analogues
 - Supported graduate students with their research projects and statistical analyses
 - Designed and conducted multivariate experiments on wetland biogeochemistry of Rocky Mountain foothills in Alberta
- 2015-2016 WETLANDS ENGINEER (Postdoc, Environment – Oil Sands Development & Research)
Imperial Oil Resources Ltd. (Exxon Mobil)
Calgary, Alberta, Canada
- TEAM LEAD
- Coordinated modelling of a contaminated water treatment wetland for a possible release of quality water to the Athabasca River watershed
 - Wrote grant proposal and designed and developed a project to remotely monitor the success of reclamation of a restored well pad using the Eddy Covariance technique
 - Reviewed technology proposals on area fugitive emissions and recommended COSIA's GHG workgroup.
 - Coordinated SSHE representatives across Imperial to synergize common goals
- 2010-2014 PhD SCHOLAR / GTA / GRA
Department of Geography
University of Calgary, AB
- Led 10 field trips/year (each trip a week-long) to boreal forest, Alberta.
 - Installed, maintained, and operated numerous micrometeorological equipment
 - Measured greenhouse gases (CO₂, CH₄), dissolved organic carbon and nutrient cycling at natural and disturbed sites.
 - Handled, analyzed, and empirically modelled large data sets using Excel, SPSS, Minitab, SigmaPlot, JMP, and other software.
- 2009 GRADUATE RESEARCH ASSISTANT
Department of Renewable Resources
University of Alberta
- Supported field teams for their greenhouse experiments in Smokey Lake, AB
 - Helped to monitor the germination, propagation, and growth of boreal native plants
- 2005-2009 MANAGER HEALTH, SAFETY & ENVIRONMENT (HSE)
Shell Canada Products Ltd.
Alberta and British Columbia

- Management of gasoline inventories, monitoring of gas and water piezometers to sustain the quality of surface- and groundwater
- Used due-diligence approaches to protect human health and the environment in compliance with Alberta EPEA and Water Act and reported to senior management
- Provided 18 on-site group training related to human and environmental health and safety

2002-2004 LABORATORY SUPERVISOR (Agriculture & Environment)
EnviroTest Labs, Calgary, AB

- Supervised analyses of contaminated soil, water, and vegetation samples.
- Provided consultancy services for remediation, reclamation, revegetation, and restoration of environmentally sensitive ecosystems
- Monitored QA/AC and reported to the lab information management system
- Authored analyses and technical reports for clients and senior management

RECOGNITIONS, HONOURS, GRANTS AND SCHOLARSHIPS, SOCIAL SERVICES

2017-2024 Member, Planning Committee – Alberta Soil Science Workshop

2015-2022 Licensed Professional Agronomist – Alberta Institute of Agrologists, AB

2020 Member Technical Review for Wetlands – NAIT, AB

2017-2018 Wetland Ambassador Mentor – (with funding to a PhD student and research completed in Peace River, AB) Society of Wetland Scientists, USA

2017 Scholarly Teaching Activity Grant – Geography, University of Calgary, AB

2012-2014 Teaching Fellow – Geography, University of Calgary, AB

2013 TOP-Best Presentation Award – Alberta Biological Solutions Forum & CCEMC, AB

2011-2014 Queen Elizabeth II Doctoral Scholarship – Geography, University of Calgary, AB

2011-2012 John D. Petrie Memorial Bursary Award – University of Calgary, AB

2012 Dr. Karl C. Ivarson Award - Agricultural Institute of Canada

2009-2019 Environmental Professional – Environmental Career Organization (ECO), Canada

1991 Sir William Robert Talent Scholarship – University of Agriculture, Faisalabad

SOCIAL SERVICE

2020-2021 Doorstep Food delivery (COVID-19; Pak-Canada Association)

2016 Social Worker (WINS; Women in Need Society)

2015 Reception & Ticket Scanning (Imperial Cup Spruce Meadows)

2015 Registration Desk Services (Imperial Oil; Live Art Auction for Charity)

PROFESSIONAL TRAINING & CERTIFICATIONS

2021 University of Calgary, AB

- Harassment and Violence Awareness Training

2019-2020 University of Saskatchewan

- Cyber Security Awareness Course
- Health & Safety Course
- Time Management Course – Mitacs EDGE
- Introduction to Research Grants for Postdocs
- Business Writing for Today's Professional
- Developing Research Profile
- Leading Change & Negotiating for Success

2019-2020 Standard First Aid & CPR/AED Level C. (due for renewal)

2015-2016 Imperial Oil Resources, Calgary, AB

- Cyber Security Awareness (CSA)
- WHMIS for Imperial Oil
- Records Management Guidelines
- Frequent Driver Safety – Mentally Active Driving & Fleet Safety
- Upstream Operations Integrity Management System (OIMS)
- Workforce Security Awareness
- Experimental Gate Process Following & Project Files Managing
- Gas Alarm Responding To
- Imperial Oil Field Operations Working With
- Lab Safety Systems - Using
- Materials & Equipment - QA & QC
- Regulatory Requirements - Managing
- Research Projects - Decommissioning
- Risk Screening & Management of Change for Experiments
- Job Safety Analysis (JSA) & Pre-Job Planning
- Hazard Severity, MSDS, & Hazardous Materials Ordering, Receiving & Disposing
- Protective Clothing & Equipment + Eye Wash Units
- Working or Travelling Alone
- Technical Level Risk Assessment for Risk Screeners
- Project Leader - One-Time Training
- Management and Protection of Information - MPI
- Data Integrity Assurance Management System (DIAMS)
- H₂S and Hydrocarbon Gases-Handling, Storing, and Disposing of (S-2000)
- Risk Assessment and Management for Decision Makers
- Safety Management System (SMS)
- Forest and Rangeland Management – Alberta Institute of Agrologists
- Wetland Management – Alberta Institute of Agrologists

- 2010-2014 University of Calgary
- University Teaching Certificate
 - Instructional Skills Workshop
 - Occupational Health & Safety
- 2009 University of Alberta
- Green Defensive Driving
- 2005-2009 Shell Canada Products Ltd.
- Food Sanitation & Hygiene – Section 32, Calgary Health Region, AB
 - Emergency Response Scenarios
 - Health, Safety, Security & Environment

JOURNAL PUBLICATIONS

- 2024 Maes et al. (including Munir TM). 2024. Environmental drivers of increased ecosystem respiration in a warming tundra. *Nature*, 629: 105-113. **(IF = 50.50)**
- 2022 **Munir TM**, Westbrook CJ. 2022. Comparison of Soil Nutrient Supply Patterns among Full and Drained Beaver Ponds and Undisturbed Peat in a Rocky Mountain Fen. *Wetlands*, 42: 1-13. **(IF = 2.20)**
- 2021 **Munir TM**, Westbrook CJ. 2021. Thermal characteristics of a beaver dam analogues equipped spring-fed creek in the Canadian Rockies. *Water*, 13: 990. **(IF = 2.54)**
- Kumar S, Meena RS, Singh RK, **Munir TM**, Datta R, Danish S, Yadav GS, Kumar S. 2021. Soil microbial and nutrient dynamics under different sowing environments of Indian mustard (*Brassica juncea* L.) in rice-based cropping system. *Scientific Reports*, 11:5289. **(IF = 4.00)**
- Bengtsson F, Rydin H, Baltzer JL, Bragazza L, Bu ZJ, Caporn SJ, Dorrepaal E, Flatberg KI, Galanina O, Gałka M, Ganeva A, Goia I, Goncharova N, Hájek M, Haraguchi A, Harris L I, Humphreys E, Jiroušek M, Kajukało K, Karofeld E, Koronatova NG, Kosykh NP, Laine AM, Lamentowicz M, Lapshina E, Limpens J, Linkosalmi M, Ma JZ, Mauritz M, Mitchell EA, **Munir TM**, Natali S M, Natcheva R, Payne RJ, Philippov DA, Rice SK, Robinson S, Robroek BJ, Rochefort L, Singer D, Stenøien HK, Tuittila ES, Vellak K, Waddington JM, and Granath G. 2021. Environmental drivers of Sphagnum growth in mires across the Holarctic region. *Journal of Ecology*, 109: 417-431. **(IF = 6.43)**
- 2020 **Munir TM**, Westbrook CJ. 2020. Beaver dam analogue configurations influence stream and riparian water table dynamics of a degraded spring-fed creek in the Canadian Rockies. *River Research and Applications*, 37:330-342. **(IF = 1.92)**

Ahmed N, Habib U, Younis U, Irshad I, Danish S, Rahi AA, **Munir TM**. 2020. Growth, chlorophyll content and productivity responses of maize to magnesium sulphate application in calcareous soil. *Open Agriculture*, 5:792-800. (IF = 0.79)

Idrees M, Anjum MA, Mirza JI, Ahmad I, **Munir TM**. 2020. Potassium humate amendment regulates soil NPK supply and growth parameters of potato (*Solanum tuberosum* L.) In a calcareous soil. *Pakistan Journal of Botany*, 52(5): 1647-1653. (IF = 0.80)

Zafar-ul-Hye M, Wasim MM, **Munir TM**, Aon M, Shaaban M, Abbas M, Hussain M, Ahmad M. 2020. Co-application of sugarcane bagasse biochar, farmyard manure and mineral nitrogen improved growth indices of corn grown in alkaline calcareous soil. *Journal of Plant Nutrition*, 43(9): 1293-1305. (IF = 1.23)

Younis U, Danish S, Malik SA, Ahmad N, Khalid R, **Munir TM**. 2020. Role of cotton sticks biochar in immobilization of Nickel under induced toxicity condition and growth indices of *Trigonella corniculata* L. *Environmental Science and Pollution Research*, 27:1752-1761. (IF = 3.31)

2019

Danish S, Kiran S, Ahmad N, Ali MA, Tahir FA, Rasheed MK, Shahzad K, Li X, Wang D, Mubeen M, Abbas S, **Munir TM**, Hashmi MZ, Adnan M, Saeed B, Saud S, Khan MN, Ullah A, Nasim W. 2019. Alleviation of chromium toxicity in maize by iron toxicity and chromium tolerant ACC deaminase producing plant growth promoting rhizobacteria. *Ecotoxicology and Environmental Safety*, 185: 109706. (IF = 4.87)

Hashmi S, Younis U, Danish S, **Munir TM**. 2019. *Pongamia pinnata* L. leaves biochar increased growth and pigments syntheses in *Pisum sativum* L. exposed to nutritional stress. *Agriculture*, 9(7): 153. (IF = 2.07)

Zafar-ul-Hye M, Danish S, Abbas M, Ahmad M, **Munir TM**. 2019. ACC Deaminase producing PGPR *Bacillus amyloliquefaciens* and *Agrobacterium fabrum* along with biochar improve wheat productivity under drought Stress. *Agronomy*, 9(7): 343. (IF = 2.60)

Strack M, **Munir TM**, Khadka B. 2019. Shrub abundance contributes to shifts in dissolved organic carbon concentration and chemistry in a continental bog exposed to drainage and warming. *Ecology*, 100(5): e2100. (IF = 2.77)

Bechtold M, De Lannoy GJM, Koster RD, Reichle RH, Mahanama SP, Bleuten W, Bourgault MA, Brümmer C, Burdun I, Desai AR, Devito K, Grünwald T, Grygoruk M, Humphreys ER, Klatt J, Kurbatova J, Lohila A, **Munir TM**, Nilsson MB, Price JS, Röhl M, Schneider A, Tiemeyer B. 2019. PEAT-CLSM: A specific treatment of peatland hydrology in the NASA catchment land surface model. *Journal of Advances in Modeling Earth Systems*, 11(7): 2130-2162. (IF = 4.40)

- 2018 Ahmad I, Bibi F, Ullah H, **Munir TM**. 2018. Mango fruit yield and critical quality parameters respond to foliar and soil applications of zinc and boron. *Plants*, 7(4): 97. (IF = 2.63)
- Granath G, Rydin H, Baltzer JL, Bengtsson F, Boncek N, Bragazza L, Bu Z-J, Caporn SJM, Dorrepaal E, Galanina O, Gałka M, Ganeva A, Gillikin DP, Goia I, Goncharova N, Hájek M, Haraguchi A, Harris LI, Humphreys E, Jiroušek M, Kajukalo K, Karofeld E, Koronátová NG, Kosykh NP, Lamentowicz M, Lapshina E, Limpens J, Linkosalmi M, Ma J-Z, Maurit M, **Munir TM**, Natali SM, Natcheva R, Noskova M, Payne RJ, Pilkington K, Robinson S, Robroek BJM, Rochefort L, Singer D, Stenøien HK, Tuittila E-S, Vellak K, Verheyden A, Waddington JM, Rice SK. 2018. Environmental and taxonomic controls of carbon and oxygen stable isotope composition in sphagnum across broad climatic and geographic ranges. *Biogeosciences*, 15: 5189-5202. (IF = 3.48)
- 2017 **Munir TM**, Khadka B, Xu B, Strack M. 2017. Mineral nitrogen and phosphorus pools affected by water table lowering and warming in a boreal forested peatland. *Ecohydrology*, 10(8): 1-15. e1893. (IF = 2.77)
- Munir TM**, Khadka B, Xu B, Strack M. 2017. Partitioning forest-floor respiration into source-based emissions in a boreal forested bog: responses to experimental drought. *Forests*, 8: 1-17. (IF = 2.22)
- 2016 Khadka B, **Munir TM**, Strack M. 2016. Dissolved organic carbon in a constructed and natural fens in the Athabasca oil sands region, Alberta, Canada. *Science of the Total Environment*, 557 – 558: 579-589. (IF = 6.55)
- Munir TM**, Khadka B, Jamro GM, Ullah H. 2016. Black spruce productivity and foliar C:N ratio responses to peatland water-table level: A climate change standpoint. *Science International*, 28:4043-4048.
- 2015 Khadka B, **Munir TM**, Strack M. 2015. Effect of environmental factors on production and bioavailability of dissolved organic carbon from substrates available in a constructed and reference fens in the Athabasca oil sands development region. *Ecological Engineering*, 84: 596-606. (IF = 3.51)
- Munir TM**, Perkins M, Kaing E and Strack M. 2015. Carbon dioxide flux and net primary production of a boreal treed bog: Responses to warming and water-table-lowering simulations of climate change. *Biogeosciences*, 12(4): 1-21. (IF = 3.48)
- 2014 **Munir TM**, Strack M. 2014. Methane Flux Influenced by Experimental Water Table Drawdown and Soil Warming in a Dry Boreal Continental Bog. *Ecosystems*, 17(7): 1271-1285. (IF = 4.56)

Munir TM, Xu B, Perkins M, Strack M. 2014. Responses of carbon dioxide flux and plant biomass to water table drawdown in a treed peatland in northern Alberta: a climate change perspective. *Biogeosciences*, 11: 807-820. (IF = 3.48)

2013 **Munir TM**, Xu B, Perkins M, Strack M. 2013. Responses of carbon dioxide flux and plant biomass to drought in a treed peatland in northern Alberta: a climate change perspective. *Biogeosciences Discussions*, 10, 14999-15031. (IF = 3.48)

BOOK CHAPTERS

Munir TM, Khadka B, Xu B, Strack M. 2018. Partitioning Forest-Floor Respiration into Source Based Emissions in a Boreal Forested Bog: Responses to Experimental Drought. In R. Jandl & M. Rodeghiero (Eds.), *Forest Soil Respiration under Climate Changing*: 146-162. Basel, Switzerland, MDPI.

Zafar-ul-Hye M, Danish S, Abbas M, Ahmad M, **Munir TM**. 2019. ACC Deaminase producing PGPR *Bacillus amyloliquefaciens* and *Agrobacterium fabrum* along with biochar improve wheat productivity under drought Stress. In JM Rosa (Ed.), *Biochar as Soil Amendment*: 123-138. Basel, Switzerland, MDPI.

CONFERENCE PRESENTATIONS (with or without Publications in Proceedings)

2019 Bechtold M, De Lannoy GJM, Koster RD, Reichle RH, Mahanama SP, Roose D, and the Team (**Munir TM**). 2019. Peatland hydrology in a global land surface modelling and data assimilation framework. European Geophysical Union General Assembly, April 7-12, Vienna, Austria.

2020 **Munir TM**, Westbrook C. 2020. Do beaver dam analogues (BDAs) influence downstream temperature regime?. Centre for Hydrology – Geography and Planning, University of Saskatchewan, Nov 2. Saskatchewan, Canada.

2017 **Munir TM**, Khadka B, Xu B, Strack M. 2017. Dissolved organic carbon production affected by warming and water-table lowering in a boreal forested bog: A climate impact perspective. Alberta Soil Science Workshop, Feb 15-17, Lethbridge, AB, Canada.

Munir TM, Greenhouse gases: Emission, monitoring and reporting. Alberta Professional Agriculture Association, Aug 13. Calgary, AB, Canada.

2016 **Munir TM** and Young MA. 2016. Carbon sequestration at reclaimed wetlands and modelling of treatment wetlands. COSIA, Feb 9, Calgary, AB, Canada.

Munir TM, Young M. 2016. Boreal peatland disturbance: Climate change, land use change and restoration. Well Pad Reclamation Workshop, Oct 21. Cold Lake, AB, Canada.

2015

Munir TM, Young MA, Bekele A. 2015. Wetlands: Carbon gas flux monitoring and treatment function modelling. Conservation and Reclamation workshop, Sep 31-Oct 1, Imperial Oil Resources, Cold Lake, AB, Canada.

Munir, TM and Strack M. 2015. Responses of nutrient dynamics to warming and water-table lowering simulations of climate change in a northern treed bog. Alberta Soil Science Workshop, Feb 17-19, Edmonton, AB, Canada.

Munir TM, Khadka B, Strack M. 2015. Dissolved Organic Carbon concentration and chemistry affected by warming and water-table-lowering in a Boreal treed continental bog in Alberta. Canadian Geophysical Union, May 3-7, Montreal, QC, Canada.

Munir TM, Khadka B, Strack M. 2015. Responses of nutrient dynamics to warming and water-table-lowering in a northern treed bog in Alberta. Canadian Geophysical Union, May 3-7, Montreal, QC, Canada.

Munir TM, Young M. 2015. Remote monitoring of a reclaimed wetland at Cold Lake. Remote Sensing and Monitoring Workshop, May 12. Calgary, AB, Canada.

Khadka B, **Munir TM**, Strack M. 2015. Evaluating function of a constructed fen in Alberta's oil sands region using dissolved organic carbon concentration and chemistry. COSIA Oil Sands Water Conference and Workshops, Mar 11-13. Edmonton, AB, Canada.

2014

Munir TM, Kaing E, Strack M. 2014. Carbon dioxide flux and plant biomass affected by warming and water table drawdown in a boreal peatland in Alberta. Canadian Geophysical Union, May 4-7, Banff, AB, Canada.

Munir TM, Kaing E, Strack M. 2014. Carbon dioxide flux and plant biomass in a boreal peatland affected by warming and water table drawdown. Alberta Soil Science Workshop, Feb 12-14, Calgary, AB, Canada.

Strack M, Hassanpour G, Zuback Y, Mahmood MS, Keith AM, **Munir TM**. 2014. Methane flux from Canadian restored cutover peatlands. Alberta Soil Science Workshop, Feb 12-14, Calgary, AB, Canada.

Strack M, **Munir TM**. 2014. The potential impact of climate change on northern peatland carbon exchange. Peatland Ecology Research Group, Feb 19-20, University of Laval, Quebec, Canada.

Bremer E, **Munir TM**, Strack M, Wood M, Macrae M, Nwaishi F, Petrone R, Devito K. 2014. Soil nutrient supply rates in natural and constructed wetlands of the oil sands region. Alberta Soil Science Workshop, Feb 12-14, Calgary, AB, Canada.

- 2013 **Munir TM**, Strack M. 2013. Peatland-atmosphere methane flux influenced by experimental warming and water table drawdown in northern Alberta. Biological Solutions Forum, Oct 9-10, Calgary, AB, Canada.
- Munir TM**, Xu B, Perkins M, Strack M. 2013. Responses of carbon dioxide flux and plant biomass to experimental drought in a treed peatland in northern Alberta: A climate change perspective. Canadian Geophysical Union, May 26-30, Saskatoon, SK, Canada.
- Munir TM**, Strack M. 2013. Potential Effects of climate change on Methane Dynamics of a Boreal Alberta Peatland. Alberta Soil Science Workshop, Feb 19-21. Lethbridge, AB, Canada.
- Munir TM**, Kaing E, Xu B, Strack M. 2013. Carbon dioxide flux and plant biomass at a boreal Alberta peatland affected by warming and water table drawdown. Alberta Soil Science Workshop, Feb 13. Calgary, AB, Canada.
- Munir TM**, Strack M. 2013. Peatland-atmosphere methane flux influenced by experimental warming and water table drawdown in boreal Alberta: A climate change perspective. Second Annual Computational Science Conference, Oct 25. Islamabad, Pakistan
- 2012 **Munir TM**, Perkins M, Xu B, Strack M. 2012. Effects of water table drawdown on carbon dynamics and plant biomass of a boreal Alberta peatland. Alberta Soil Science Workshop, Feb 15. Edmonton, AB.

REFERENCES

1. Dr. Maria Strack, Professor and Canada Research Chair, Geography and Environmental Management, University of Waterloo, ON
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2. Dr. Bin Xu, NSERC Industrial Research Chair, Boreal Research Institute, NAIT, Peace River, AB
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Phone (780) 624-3257
3. Dr. Cherie Westbrook, Professor of Ecohydrology and Director – NSERC CREATE for Water Security, Centre for Hydrology, University of Saskatchewan
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