

## Canadian System of Soil Classification 4<sup>th</sup> edition: Reviving the Soil Classification Working Group



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### **Abstract**

The Canadian System of Soil Classification (CSSC) was last updated in 1998. Since its release, federal expertise in soil survey and classification has declined significantly, and the technical capacity for oversight of the CSSC is no longer present within the organization. The Pedology Committee of the Canadian Society of Soil Science (CSSS) was established in 2005 as a coordinating body for the advancement of soil classification and genesis in Canada with the primary objective of centralizing pedology expertise within the CSSS to mitigate the effects of diminishing federal government involvement in soil survey.

In 2008, the Pedology Committee identified a need to capture current pedological knowledge for each soil Order in the CSSC; and a need to develop a framework to accept and publish revisions to the CSSC. As a result, in 2011, a Special Issue of the Canadian Journal of Soil Science (CJSS) dedicated to soil taxonomy for the ten Orders of the CSSC was published. However, with a lack of a developed framework for proposing and making changes to CSSC, an effort to develop the 4<sup>th</sup> edition of the CSSC never materialized.

In 2018 the Pedology Committee mandate was re-examined, and update of the CSSC was adopted as one of its top priorities. As such, the Soil Classification Working Group (SCWG) was re-established with representation from across Canada and all sectors to guide the development of a framework that would lead to implementing the 4th edition of the CSSC. At the 2019 CSSS meeting it was agreed that major revisions to the CSSC would require publication in a peer-reviewed journal. A Collection of articles, *Advances in Soil Survey and Classification in Canada*, has now been published in the CJSS (<https://cdnsiencepub.com/topic/cjss-soil-survey>), and includes 10 research articles dedicated to proposed revisions to the CSSC.

Starting in January 2023, the SCWG will resume meetings to discuss, evaluate, and make decisions to accept or reject the proposed changes to the CSSC. In addition to these major proposals, an online form is available for soil scientists across Canada to submit minor revisions to the CSSC, such as consistency issues, spelling or editing errors, and re-

organization of the manual. The working group will then be tasked with updating the “orange book” and working through publication of the 4th edition of the CSSC.

### **Biography**

Mr. Daniel Saurette is a Land Resource Specialist with the Ontario Ministry of Agriculture, Food and Rural Affairs, based in Guelph, ON. He has an Honors Bachelor of Environmental Studies in Forest Conservation from Lakehead University, an MSc in Soil Science from University of Alberta, and is currently a PhD candidate at the University of Guelph. Daniel has worked both in the private sector and an environmental consultant and in the public sector with AAFC and OMAFRA. Daniel specializes in soil classification, soil mapping, and landscape interpretation. His current focus is on developing predictive digital soil mapping techniques to expedite delivery of updated soil maps for agricultural areas of Ontario using big data and machine learning. As part of this work, Dan is completing a PhD program which seeks to develop techniques to optimize sample design for predictive digital soil mapping.