

Agenda
CSSS 2021 Annual General
meeting June 7, 2021 14:40 –
16:40 ADT

You are invited to 2021 CSSS virtual AGM Zoom meeting.

Join Zoom Meeting

<https://us02web.zoom.us/j/84868276798?pwd=blVhWGhjMVovcGIJYXh0RmVpbzgydz09>

Meeting ID: 848 6827 6798

Passcode: 240934

One tap mobile

+13462487799,,84868276798#,,,,*240934# US (Houston)

+14086380968,,84868276798#,,,,*240934# US (San Jose)

Dial by your location

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 646 876 9923 US (New York)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

Meeting ID: 848 6827 6798

Passcode: 240934

Find your local number:

<https://us02web.zoom.us/j/kbyekVUuec>

71 participants including council members.

1. Call to Order: Angela Bedard-Haughn
Angela welcomed everyone to the CSSS conference and acknowledged that she was on Treaty 6 Territory. Angela asked others to share what Indigenous land they resided on in the comments box.
2. Approval of agenda - Diane motioned. Asim seconded. No objections.
3. Minutes from 2020 AGM: Lee-Ann Nelson
Angela noted that the 2020 Minutes have been uploaded to the website and google drive for review. Angela asked if there were any errors or omissions to the 2020 AGM minutes. Motion to approve Rich. Asim Seconded. No objectives.

Lee-Ann introduced new faces on council and noted that the vacant positions for next year will be president-elect and Western councillor so if anyone is interested, please put your name forward.

4. Business arising from 2020 minutes - Angela asked whether there was anything arising. No additions.
5. Treasurer's Report: Diane Knight

Diane started by reviewing the tables itemizing where the funds are held, 2020 revenues and expenditures, and a proposed budget for 2021. We have an almost balanced projected budget for 2021 with just a ~\$1900 net loss. Our goal is to protect principal and spend excess funds to support existing and new initiatives.

Diane asked if anyone has any questions. Angela thanked Diane. Fran Walley asked about funding for international travel awards since we didn't have any last year. Fran Walley asked about increasing the number of CSSS student travel awards. Diane will look into the feasibility of doing this. Diane reported the new investment strategy with CIBC Wood Gundy. Don Flaten said that he agrees with Diane's investment strategies. Don noted that the month before a previous crash the CSSS had moved investments to more stable investments and it helped to keep the principal safe. Don suggested that a small group of people should be involved in investments. Angela and Diane agree.

Motion to approve Diane's report by Louis. Seconded by Anne. No objections.

6. President's Report: Angela Bedard-Haughn

Angela discussed increase in membership. Discussed suggestions from registrations this year and how we plan to look for additional ways to improve our membership. Angela notes that one of her personal goals is to get federal leadership to recognize the value of soil science (ex., Private members Bill C-290 Soil Conservation Act). Angela encourages members to speak with MPs.

Dan asked if we could have a typed letter that we just fill in our names to send to MP.

Angela said that we can work on that!

7. Report of Committees:

a. Awards committee: Asim Biswas

Asim thanked Nate and Maja for their help and noted that there are a lot of changes this year. We have not yet received any international student travel award applicants but we have rolling deadlines so there may be some coming forward. Asim reviewed the Award's committee report. Asim was very thankful for all judges who volunteered for the oral and poster competitions. He also explained how we had an extraordinary year for the Fellow Awards. The CSSS received 5 very strong candidates (some have supported the CSSS for 35-37 years!). Fellow Awards were given to all five nominated individuals. There were no questions.

i. Motion to create Early Career Award.

Asim introduced the idea of an early career award. Gordon Price asked if there is a time frame for early career award. Asim said that we are trying to get this approved now so we can institute it for the 2022 AGM. Angela mentioned that terms of reference will be created regarding requirements of award.

Motion em-2021 18- While the Fellow award recognizes the lifetime contribution of our members, younger members with strong contributions and great trajectory must be encouraged with awards too. Thus, the council proposes a new award for younger soil scientists and the award committee will work to develop terms of reference for the new award. Motion for early career award by Asim. Seconded by Diane. No objections.

b. Education committee: Maja Krzic (Tom Yates and Amanda Diochon on committee as well)

Maja noted that Tom has been instrumental in having meetings to discuss how to teach during a pandemic online. She said that it really helped not feel alone in online education.

i. CSSS Textbook Update

Textbook is in its last stages of edits. There is a separate meeting about the textbook tomorrow where more details will be shared. This textbook will be free and published in English and French (hopefully ready for use in September 2021).

Maxime Pare – We believe that this book would be especially useful to be in French. Estimate that we may need up to \$10,000 to finish translating book.

Amanda – need to bring this up at AGM because it is over the \$5,000 value allowed to be approved by council. Would be invoiced through the business office to support this textbook.

Motion em-2021-19: Financial support of up to \$10,000 for the French translation of the introductory soil science Background: Publication of the English version of the introduction to soil science textbook, Digging Into Canadian Soils, by the CSSS is in its final stages and translation of the textbook into the French language is in progress. To date, three of the 18 chapters (not including the glossary) have been translated with financial support from Université du Québec à Chicoutimi (\$10,000), AQSSS (\$4,000), Laval University, through Département des sols et de génie agroalimentaire (\$1,000) and the CSSS. Translation is done on a word count basis, and it is anticipated that the full cost of translation may require additional funding of up to \$10,000. Motioned by Maja Krzic. Seconded by Amanda Diochon.

Angela asked for any questions or objections. Adam Gillespie asked if some of us that wrote textbook will need to help translators. Max said that translating is going quick by third party. Rich and Fran noted that having additional French speakers reviewing translated chapters would be very useful (ex. Adam and Dan).

c. Pedology committee: Daniel Saurette

Dan thanked Angela and Brandon for their volunteer hours working on this committee.

The Pedology Committee and the Canadian Digital Soil Mapping Working Group (CDSMWG) organized and hosted a 2-day training event in 2020 and held a 1-day online conference. They are currently working on getting the publishing rights for CSSS and releasing updated version.

Dan mentioned the special issue in CJSS for Advanced in Soil Survey and Classification in Canada is currently seeking manuscripts! Deadline October 29, 2021.

The committee would like to develop a National Soils Database and are looking for funding.

There were no questions.

8. CJSS Editor's Report: Anne Naeth

Anne provided a separate report for review. Anne acknowledged the associate editors who ended and renewed their terms this year. She also thanked the 2020 editors. If someone is interested in becoming a reviewer, please connect with Anne. Anne thinks that if every member could review at least one paper a year that would significantly speed up reviewing time.

There are three special issues coming up and she is now thinking about 2023. If someone has ideas for a special issue please contact Anne. CSP is reducing donation to CSSS due to financial hardship, but this is up for review when things improve. The CSSS encourages researchers and students to publish in CJSS.

Anne noted that the volunteered subscription rate for CJSS access is currently \$50 but CSP will reduce membership to \$25 if all members are subscribed.

- a. **Motion em-2021-20:** Motion to increase member fees by \$25 in order to include CJSS subscription and to increase membership with journal. Only non-student members will pay the increased member fee; however, all members will have access. Motioned by Anne. Seconded by Diane. No opposed.

Rich asked if the journal would go to students without increased fees. Anne noted that CSP confirms that there is no reason for students not to get access to CJSS.

9. Student Representative's Report: Erika Young

Erika summarized the student report. There have been two photo winners this year and a new photo contest is running until August 26, 2021. Trivia session is happening tomorrow for students with prizes. Angela said thanks and said that Erika is doing a great job. No questions.

10. Western Councillor's report and Social Media Update: Rich Farrell

Rich reviewed Western Councillor's Report. Rich thanked Shirley Ho for her help with the difficult webpage tasks. We are currently exceeding goals for social media on Twitter, Facebook and LinkedIn. Posts regarding grad student research are most popular so if you have grad students it would be a great addition to our social media accounts.

Rich's current goals are to create a membership portal and to create e-mail accounts for council members that allow us to have secure internal storage and will provide seamless document transfer with new council members. Rich is working with Diane regarding Sponsorship/Advertising Strategy for the CSSS. Rich is thankful for his time on council and has had a lot of fun. Angela said thank you. No questions for Rich.

11. Eastern Councillor's report: Louis-Pierre Comeau

Louis reviewed the Eastern Councillor's report. Louis encourages supervisors to motivate their students to participate in the CSSS. Louis asked that if anyone, or their grad students, have any information or articles that they would like include in newsletters to send them his way. Louis is currently also participating in the CSSS social media project and the 2030 bid to host the World Congress of Soil Science in Toronto. If anyone who is French speaking would like to contact a council member, please feel free to contact Louis.

Louis is happy to review one or two French chapters.

No Questions.

Motion em-2021-21: Motion to approve 2021 CSSS AGM minutes for sections 6 through 11. Dan motioned. Max seconded. No objections.

12. Resolution of Appreciation: Angela Bedard-Haughn

Acknowledged outgoing council members (Fran Walley (former Past-President), Amanda Diochon (former Secretary), Edith Olson (former Treasurer) and Gazali Issah (former Graduate Student Representative)). Thanked Preston Sorenson and Gordon Price for review of financial documents. Acknowledged all the effort and resiliency of those that organized the 2021 CSSS Conference (Judith Nyiraneza, Scott Anderson, Tandra Fraser, Louis-Pierre Comeau, Amy Sangster, Kyra Stiles and Dana Harris). Angela also acknowledged our excellent support team: Nancy Zubriski (Business Manager), Shirley Ho (Website Host), Samantha Fowler (Communications specialist). Angela motioned to approve 2021 Resolutions. Seconded by Rich. No objections.

13. New Business

a. Appointment of financial reviewers: Diane Knight

Once a year we require two financial reviewers. Diane received a lot of good ideas and suggestions from Gordon and Preston that will help her move forward in a more organized and efficient way. If there is anyone who wants to volunteer now for next year, please let Diane know.

Angela asked for any volunteers. Preston Sorenson volunteered to do it again next year.

Hida Manns asked about formal audit as well. Diane said that we do not have a formal audit but the person doing our taxes does review our records prior to submission. We would do one if we are asked to since it costs a lot.

b. Updates to the 2014 Rules document for consideration: Nathan Basiliko

Nate was not present, so Angela reviewed rules document. Last year changes were made to this document but noted items requiring amendment this year. Most changes have been completed in the Awards section in order to align with our current practices and to clear up the language. Member rate will increase to \$115 to include the \$25 increase for CJSS subscription with membership.

Motion em-2021-22: Motion to approve edits in Rules documents and to increase membership from \$90 to \$115 by Angela. Seconded by Louis. No objections.

c. Anti-racism Task Group Update: Nathan Basiliko

Nate has created survey regarding equity, inclusion, etc. consistent of multiple-choice questions and open-ended questions. Nate asked if anyone would like to share their experiences with discrimination and racism at schools and workplaces and would like to know if there is anything that CSSS could do to help. The hope is that this survey can improve the CSSS. If anyone is interested in joining anti-racism task group, please let him know. Any feedback is very helpful!

No questions. Angela said that if anyone could review survey questions that would be really helpful.

d. CSSS support for the 2030 WCSS bid: Richard Heck

Richard is very thankful for all of the people that are helping him out with the 2030 WCSS bid including Jacynthe Masse and Asim Biswas. Invitation is still open for those who want to get involved. Nigeria has submitted intent and Russia may also submit application for 2030 bid.

The proposal is to hold the 2030 WCSS at the Toronto Convention Center. At the end of June 2022, the final draft of the bid will be complete and we will have an answer by the start of August 2022.

Asim has created a website. If anyone has materials to add to bid (e.g., videos, photos, etc.) please let Asim know. The organizers are looking for those with experience in international conference organization and subjects that would be internationally attractive (e.g., technology developed in Canada and used worldwide). Richard would also like to translate bid into other languages if you have knowledge of another language, please contact Richard if you would like to help.

Angela thanked Richard for all his hard work.

e. Progress for 2022 meeting (Edmonton): Symon Mezbahuddin

Symon filled in for Scott Chang. They are proposing a CSSS and ASSW joint meeting on May 23-27, 2022, with one day field trip on May 26, 2021. There will also be a 3-day post conference field trip. The co-Chairs are Dr. Scott Chang, Dr. William Shotyk and Dr. Symon Mezbahuddin. There is a back up plan to run hybrid meeting at University of Alberta.

f. Motion to host 2023 meeting (Nova Scotia): Dave Burton

Motion em-2021-23: Dave proposed that the CSSS conference should happen on Truro Campus in the Sustainable Soil Management Centre. Dave motioned for 2023 meeting to happen in Truro Nova Scotia. Maja seconded. No objections.

g. Interest to host 2024 meeting (Vancouver): Maja Krzic

Expression of interest for 2024 CSSS Meeting to UBC. The CSSS conference last visited campus in 1998 and CSSS doesn't come to BC very often. UBC has been growing and is now the 4th largest university. On traditional, ancestral and unceded territory of Musqueam people. Thinking of early June for the 2024 meeting.

There were no questions. Maya will bring formal motion to Edmonton in 2022.

14. Business arising from the floor:

No other business

15. Adjourn

Angela motion to adjourn, Asim seconded, no objections.

59 attendees at adjournment.

Adjournment at 4:00 PM.

Secretary's Report:

a) Since the last AGM (on June 23, 2020 via Zoom), council has met five times by video conferencing. Council voted on 22 motions by email and video conference.

b) Elections Report: The vacant positions for 2020-21 were President-Elect, Eastern Councilor, Graduate Student Representative, Treasurer, and Secretary. Asim Biswas was elected President-Elect. Louis-Pierre Comeau was renewed as Eastern Councilor. Erika Young was elected Graduate Student Representative. Diane Knight was appointed as Treasurer. Lee-Ann Nelson was appointed as Secretary.

For 2021, positions open for election will be President-Elect and the Western Councilor. Please consider running for a council position, and please vote.

c) Outgoing council members, Fran Walley (former Past-President), Amanda Diochon (former Secretary), Edith Olson (former Treasurer) and Gazali Issah (former Graduate Student Representative), are thanked for their contributions to CSSS council. Incoming council members are welcomed to council. The CSSS is very grateful to those who let their names stand for election to the Society executive.

As of June 7, 2021 CSSS Council is:

Past-President	Nathan Basiliko
President	Angela Bedard-Haughn
President-elect	Asim Biswas
Secretary	Lee-Ann Nelson
Treasurer	Diane Knight
Graduate Student Representative	Erika Young
Eastern Councilor	Louis-Pierre Comeau
Western Councilor	Rich Farrell
CJSS Editor-in-Chief	Anne Naeth

Canadian Society of Soil Science Treasurer's Report for 2020

Submitted by J. Diane Knight, Treasurer

The 2020 financials were reviewed by Preston Sorenson and Gordon Price. Many thanks to both reviewers.

Balance Sheet

Total assets at December 31, 2020 were \$522,189 which was an increase of \$13,522 from December 31, 2019. The Society does business with two financial institutions, CIBC Wood Gundy for long-term investments and Sunova credit union for day-to-day banking and short-term investments. In addition to chequing accounts with Sunova Credit Union that are used for operating expenses, we have a high interest savings account and a short-term investment and credit union shares. Investments with Wood Gundy are in two high interest savings accounts (\$342,037; 79% of Wood Gundy investments) and three equity funds (\$92,089; 21% of Wood Gundy investments). The Wood Gundy investments account for 83% of our total assets; Sunova accounts are 17% of our total assets.

Income Statement

Revenue

Long-term investments generated \$9,088 in income representing a 2.1% annual gain from 2019. Sunova accounts generated \$1,512.

Membership and journal subscriptions were down in 2020, probably reflecting the cancellation of the Annual Meeting due to the pandemic. Because of the meeting cancellation there was no conference revenue generated in 2020. A significant revenue source was \$16,000 from Canadian Science Publishing. This is double the normal annual contribution of \$8,000 reflecting payments for both 2019 and 2020 occurring in 2020. A donation of \$10,000 from the Department of Soil Science, University of Saskatchewan was made to support the Communications/Social media initiative. We also received direct transfer of \$4990 from historical trust funds and royalties of \$595.

Expenses

The society incurred the normal annual expenses associated with running the business office, postage, purchasing director's insurance, and paying an accountant to do our tax return (total of \$11,127). Other expenditures were to Canadian Science Publishing for journal subscriptions (\$2,827), dues for membership in the International Union of Soil Science (IUSS; \$1836) and fees for our website (\$1009). \$750 was paid to CSA and CSHS for bundle memberships. The payment to CSHS included payments for 2019 and 2020 as we were not invoiced for the 2019 bundle memberships in 2019. Two special projects were underway in 2020; a Communication/Social Media initiative and development of a textbook for undergraduate teaching which will be published as an ebook. Expenses for the Communications/Social Media initiative were \$2,500 (of the \$10,000 directed donation). Expenses for the ebook were minimal; Council approved a contribution of \$5000 for costs associated with the ebook; for this reporting period \$370 was spent. Expenses for awards were lower than in previous years because of the cancellation of the Annual Meeting. The undergraduate book awards were presented (\$2,988)

and CSS-CJSS student travel awards were awarded to support student registration for virtual conferences in 2020 (\$1995).

Upcoming in 2021:

The term investment with Sunova matured on June 2, 2021. Council approved reinvestment into a 12-month term investment. The short term (the shortest available) reflects the low interest rates currently available (1.2%).

Coincident with me taking over the position of treasurer in January 2021, CIBC Wood Gundy assigned a new investment officer to oversee and provide advice for our funds. At his suggestion an Investment Policy Statement (IPS) was developed as a guiding document for decision making around investments. An ESG (Environmental, Social and Governance) approach was taken that will assist in the selection of investment products. Specifically, the IPS states *“CSSS would like to invest in a portfolio that is Environmental, Social, Governance conscious by using a positive or best in class approach. We aim to avoid investments in tobacco and weapons or military industries”*. The Wood Gundy advisor has proposed a number of investments that align with the ESG approach and our specific IPS. The target return on the proposed portfolio is 4-8%. Annual inflation in Canada was 3.4% in April 2021. In 2008 the value of the account was ca \$285,000. In 2021, accounting for inflation, this principal investment is worth ca. \$353,500. The goal is to preserve the principal investment (accounting for inflation) with excess funds to be used to support existing and new initiatives.

BALANCE SHEET at Dec 31 2020

CIBC Wood Gundy Cash	780
CIBC Wood Gundy Equities	92,089
CIBC Wood Gundy High Interest savings	342,037
<i>CIBC Wood Gundy Total Assets</i>	<i>434,907</i>
Sunova Credit Union Petty Cash	500
Sunova Credit Union Chequing	18,394
Sunova Credit Union Common Shares	1,000
Sunova Credit Union Savings	40,392
Sunova Credit Union Surplus Shares	719
Sunova Credit Union Term Investment	26,277
<i>Sunova Credit Union Total Assets</i>	<i>87,282</i>
TOTAL ASSETS	522,189
<hr/>	
LIABILITY	0.00
EQUITY	
Retained earnings – previous year	508,667
Current earnings	13,522
TOTAL EQUITY	522,189
LIABILITY AND EQUITY	522,189

INCOME STATEMENT Dec 31, 2020

REVENUE	
Change in Wood Gundy Investments	9087.71
Interest from Sunova SSUP#1	606.57
Dividends from Sunova Surplus Shares	78.04
Interest from Sunova Term Deposit	827.13
Total Investment revenue, interest & dividends	10,599.45
Membership & Journal	7,209.93
CSA Bundle membership recvd	30.00
Total membership	7,239.93
Conference Revenue	0.00
Canadian Science Publishing	16,000.00
Royalties	595.02
Donations	10,000.00
BNY Trust	485.64
Net Annual Income Trust	4,505.00
Total Other Revenue	31,585.66
TOTAL REVENUE	49,425.04
EXPENSES	
Office contract/expenses	8097.70
Insurance	1034.69
AGM/Student Reception	0.00
Conference Startup Loan ¹	10,000.00
Council Travel	0.00
CSP Journal subscriptions	2827.00
CSA & CSHS Bundle membership ²	750.00
IUSS dues	1,835.67
Website	1009.22
Communication Social Media	2,500.00
ebook	370.39
Postage	104.57
Tax return	945.00
Gov't of Canada Incorporation Fee	12.00
Total Operating Expenses	29,485.77
Bentley Speaking Award	0.00
President's Poster Award	0.00
International Student Travel Award	0.00
CSSS Conference Student Travel Award	0.00
CSSS-CJSS Student Travel Award	1,994.71
Undergraduate Book Awards	2,988.32
N. Am. Forestry Conf. (\$1,000 every 5y)	0.00
Member travel to international conf.	0.00
Publications	494.00
Total Awards	5477.03
TOTAL EXPENSES	34,962.80
NET INCOME	14,462.24

¹Conference fees for 2020 were carried over to 2021 because of the 2020 conference cancellation.

2021 BUDGET

	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2017 Budget	2018 Budget	2019 Budget	2020 Budget	Proposed Budget 2021	comments Diane
INCOME										
Membership, journal orders and donations	\$ 20,425	\$ 18,703	\$ 17,694	\$ 6,640	\$ 21,000	\$ 21,000	\$ 21,000		\$ 18,000	
Conference Income	\$ 14,759	\$ 21,587	\$ -	\$ -	\$ 4,000	\$ 6,000	\$ 6,000		\$ 10,000	Anticipate \$10,000 loan repayment
Wood Gundy Investments	\$ 13,265	\$ (1,290)	\$ 23,710	\$ 9,088	\$ 6,500	\$ 10,000	\$ 13,000		\$ 10,000	
Donations	\$ 171			\$ 10,600	\$ 50	\$ 100	\$ 50		\$ 250	
Interest on Sunova accounts	\$ 1,926	\$ 2,310	\$ 1,049	\$ 1,512	\$ 1,100	\$ 2,500	\$ 2,000		\$ 1,500	
Royalties	\$ 1,488	\$ -	\$ 591	\$ 595	\$ 1,500	\$ 1,500	\$ 1,500		\$ 600	
BNY Trust and CNH	\$ 4,643	\$ 491	\$ 4,604	\$ 4,991	\$ 4,000	\$ 4,000	\$ 4,000		\$ 4,500	
Canadian Science publishing	\$ -	\$ 8,000	\$ 4,000	\$ 16,000	\$ 10,000	\$ 6,000	\$ 6,000		\$ 3,000	
Other Income	\$ -	\$ 2,350	\$ 245	\$ -	\$ 10,000	\$ 10,000	\$ 1,000		\$ -	
Total Income	\$ 56,677	\$ 52,151	\$ 51,893	\$ 49,426	\$ 58,150	\$ 61,100	\$ 54,550		\$ 47,850	
EXPENSES										
Office Contract/Expenses	\$ 8,099	\$ 6,854	\$ 7,021	\$ 8,098	\$ 8,100	\$ 8,200	\$ 8,200		\$ 8,200	
Newsletter/Proceedings	\$ -				\$ 2,000	\$ -	\$ -		\$ -	
AGM/Student Reception	\$ 440	\$ -	\$ 522		\$ 1,000	\$ 1,000	\$ 1,000		\$ -	
Council Travel	\$ 2,782	\$ -			\$ 5,000	\$ 2,500	\$ 3,000		\$ -	
Conference Startup Loan	\$ 10,000	\$ 8,000		\$ 10,000	\$ 10,000	\$ 10,000	\$ -		\$ -	\$10,000 loaned in 2020 was carried over to 2021
AIC Dues	\$ 3,715	\$ -			\$ 1,500	\$ -	\$ 2,500		\$ -	
IUSS dues	\$ 1,684	\$ -	\$ 4,333	\$ 1,836	\$ 1,500	\$ 1,525	\$ 1,500		\$ 2,000	
Other operating expenses	\$ 2,417	\$ 210		\$ 750	\$ 2,000	\$ 2,000	\$ 2,500		\$ 2,000	
Websites	\$ 2,192	\$ 375	\$ 3,694	\$ 1,009	\$ 1,000	\$ 1,300	\$ 5,000		\$ 1,500	
Conference Expenses	\$ 1,000	\$ 494	\$ 337		\$ -	\$ -	\$ -		\$ 125	Lee-Ann's registration
Postage	\$ 22	\$ 17	\$ 69	\$ 105	\$ 1,500	\$ 500	\$ 100		\$ 125	
Bank Charges	\$ 7	\$ 5			\$ 30	\$ 50	\$ 50		\$ 50	
Insurance		\$ 918	\$ 961	\$ 1,035	\$ -	\$ -	\$ -		\$ 1,100	
Taxes			\$ 20	\$ 1,890	\$ -	\$ -	\$ -		\$ 1,000	
Receiver General			\$ 21	\$ 12	\$ 30	\$ 2,300			\$ 30	
Communications/Social media				\$ 2,500					\$ 7,500	remaining from \$10,000 donation remaining from \$5000 approved by council
eBook				\$ 370					\$ 4,600	
Total Operating Expenses	\$ 32,358	\$ 16,873	\$ 16,978	\$ 27,605	\$ 33,660	\$ 29,375	\$ 23,850		\$ 28,230	
Publication Fees Paid		\$ 1,919	\$ 3,398	\$ 2,827	\$ 5,000	\$ 3,500	\$ 3,500		\$ 3,500	

BENTLEY AND PUBLICATIONS TRUST										
C.F. Bentley Award (oral) \$500; \$300; \$200	\$ 900	\$ 1,000	\$ 1,000	\$ -	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000		
President's Award (poster) \$500; \$300; \$200	\$ 1,000	\$ 1,000	\$ 1,100	\$ -	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,200	\$ 1,000	
CSSS Student Travel Award (Annual mtg; max 12 awards, \$700/award)	\$ 8,400	\$ 5,400	\$ 11,200	\$ -	\$ 7,200	\$ 12,000	\$ 12,000	\$ 12,000	\$ -	on-line conference no travel awards
CSSS-CJSS Student Travel Award (international: max 2; max \$8000 total)	\$ 2,222	\$ 4,804	\$ 5,509	\$ 1,995	\$ 10,000	\$ 8,000	\$ 8,000	\$ 8,000	\$ 8,000	
CSSS Pedology Travel Award (max \$4000) non-student member		\$ 4,000	\$ 1,458			\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	
CSSS UG Student Book Award	\$ 2,779	\$ 2,902	\$ 3,158	\$ 2,988					\$ 3,000	
N American Forest Conf			\$ -				\$ 1,000		\$ -	
Soils Across Latitudes			\$ 20,745						\$ -	
Publications				\$ 494					\$ 500	
Student photo contest (\$125 x 4 awards)									\$ 500	
Total Awards	\$ 15,301	\$ 19,106	\$ 44,170	\$ 5,477	\$ 19,400	\$ 26,200	\$ 27,200	\$ 27,200	\$ 18,000	
Total Expenses	\$ 47,659	\$ 37,898	\$ 64,546	\$ 35,909	\$ 58,060	\$ 59,075	\$ 54,550	\$ 54,550	\$ 49,730	
Net Income (Loss)	\$ 9,018	\$ 14,253	\$ (12,653)	\$ 13,517	\$ 90	\$ 2,025	\$ -	\$ -	\$ (1,880)	

CSSS President's Report – June 7, 2021

Submitted by Angela Bedard-Haughn, PhD, PAg

From the time I agreed to let my name stand as President-elect in Fall 2019 to where we sit here today – in our homes and offices, together but separate – very little is as any of us might have expected. When we postponed the 2020 meeting scheduled for Charlottetown, it seemed plausible that we'd be admiring the beautiful red soils of PEI and dining on lobster together by June 2021. Unfortunately, that is not the case. *Fortunately*, our Maritime colleagues have risen to the challenge and put together our first-ever virtual meeting. With over 200 registrants from across Canada and beyond speaking to the full range of topics that encompass our discipline, this promises to be a very memorable experience.

In January 2021, we saw a big turnover on the Council, with four new members from across Canada: Asim Biswas (ON) as President-Elect, Diane Knight (SK) as Treasurer, Lee-Ann Nelson (AB) as Secretary, and Erika Young (NL) as Grad Student Rep. Thank you to our outgoing members for their great service to our council: Fran Walley (SK), Edith Olson (AB), Amanda Diochon (ON), and Gazali Issah (SK). Returning councilmembers: Nate Basiliko (ON) as Past President, Rich Farrell (SK) as Western Councilor, Louis-Pierre Comeau (NB) as Eastern Councilor, and Anne Naeth (AB) as CJSS Editor. Our gratitude to Nancy Zubriski who continues to provide us with support via the business office, to Shirley Ho who provides support for the website, and to Samantha Fowler, our communications specialist.

As of today, we have 276 members, up from 203 at our AGM last year, and down slightly from 284 at our 2019 AGM. This includes 128 regular members, 103 students, 11 postdocs, 13 emeritus, 12 fellows, 8 emeritus fellows and 1 honorary member. When you renewed your membership for 2021, you will have noted that the fees were unchanged. When you renewed, you also had the opportunity to share your suggestions for "How better can the society help address your professional needs?" Your ideas are summarized in the word art below; the overriding theme - in addition to the opportunity to stay up to date on the latest in research and teaching - was more opportunity for professional networking and professional/career development. Our conference is one great way we normally get to do that, but we will continue to look at more and better ways to build these opportunities as we move forward. Some suggestions include an increased number of meetings/workshops through the year, taking advantage of our new expertise in virtual meetings.

2021 CSSS AGM- Award Committee report

First, I thank the 2021 award committee members and their commitment. Thanks Maja and Nate.

Due to postponement of the 2020 meeting and the virtual nature of the 2021 meeting, the award report looks a little different this year. Several awards were not given, while several others showed a much stronger response than we have seen earlier. For example, in 2021, one of the most common awards, the students travel award was not given due to the virtual nature of the conference. Similarly, there was nomination till date for the CSSS-CJSS student travel award for international soil science meetings as well as CSSS Pedology travel Award. As international conferences can happen any time of the year and students travelling there, as well as a member can make their presence at international conferences through CSSS Pedology travel award, it is often hard to plan and apply for these grants well ahead of time with one deadline before the annual meeting. Thus, we made a rolling deadline for these two awards with three deadlines (31 March, 30 June, and 30 Sept).

There were no nominations for the CSSS Honorary Membership Award and CSSS soil science for society award.

We have 10 nominations from 10 different universities across Canada for the CSSS Book Award for undergraduate students who demonstrated excellence in soil science. We received strong and positive comments from the nominator about these new generation soil scientists. Congratulations to all of you... way to go...

For the student presentation competition, the Bentley Award and the President's award, there are 47 students competing for the oral competition and 24 student's competing for the poster presentation awards over the next three days. We are all excited about this and we will see the winners on Thursday afternoon. I also thank all the judges for taking some time from your conference plan and evaluating these students. Thanks.

Last but not the least, this year, the most prestigious and the Highest award of the society, the Fellow award was given to 5 strong individuals, for the first time in history, who made a significant contribution to our society and the Canadian soil science. This has been an extraordinary year with the 5 strongest nominations. Please join me in congratulating all the five Fellow award winners and thank them for their commitment and contribution to our society and the Canadian soil science. These contributions could take so many different forms than often we see narrowly as research and teaching. The diverse contributions, thus, must be considered in recognizing in evaluating any nominations. This year, the award committee thinks that the evaluation process must be streamlined and will work next year-round to document this.

While the Fellow award recognizes the lifetime contribution of our members, younger members with strong contributions and great trajectory must be encouraged with awards too. Thus, the council proposes a new award for younger soil scientists and the award committee will work to develop terms of reference for the new award. Here I put a motion to create the new early career award.

This is all from the award committee for now. Please attend the Award ceremony on Thursday at 3:30 pm ADT to celebrate with these winners and congratulate them.

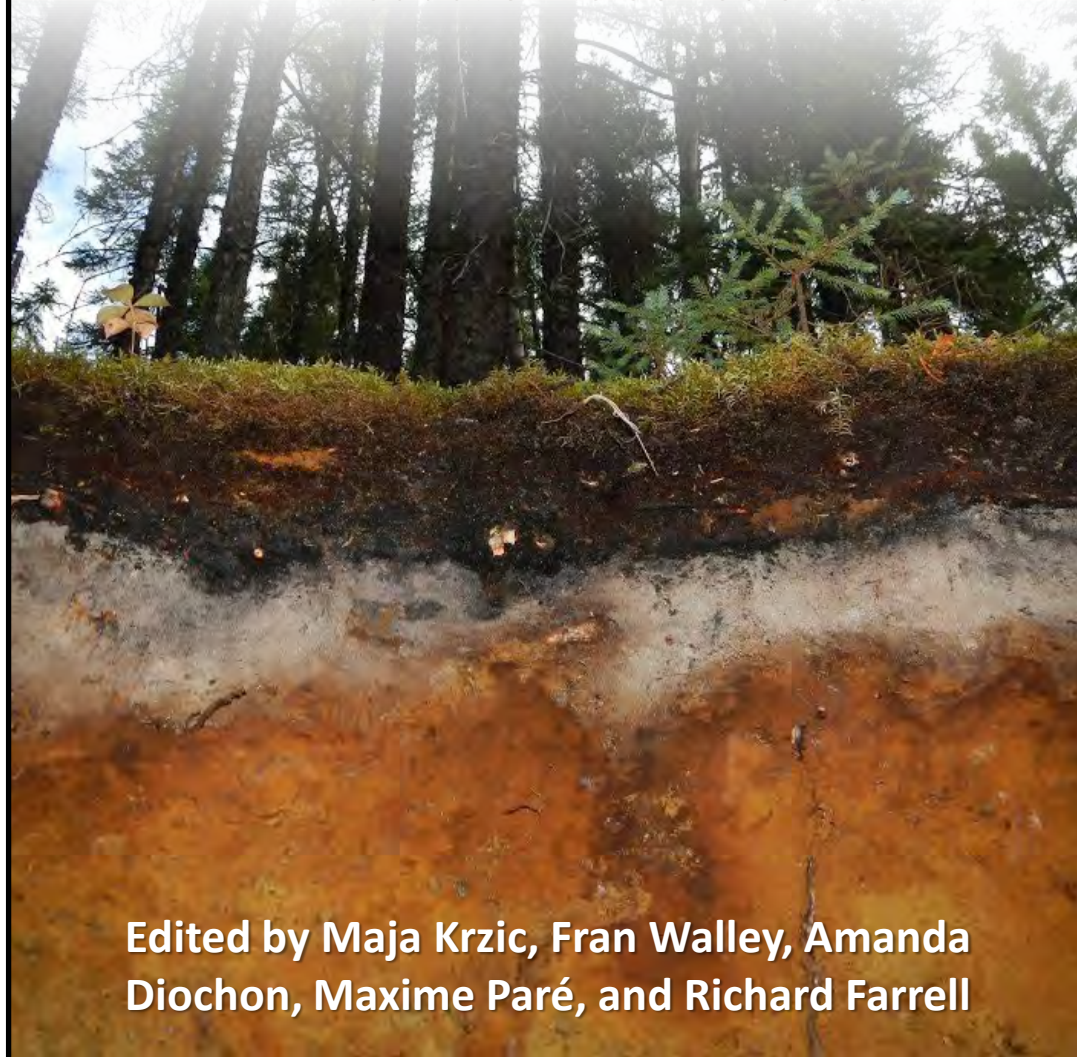
The main
activity of the
**Education
Committee...**



2021 CSSS AGM

DIGGING INTO CANADIAN SOILS

An Introduction to Soil Science



Edited by Maja Krzic, Fran Walley, Amanda
Diochon, Maxime Paré, and Richard Farrell

Brief update about the e-textbook

- It's in the last stage of edits
- Completely open
- Both in English & French
- Ready for use in September 2021

- To learn more, please join us on **June 8th at 5:45pm (AT)**



Pedology Committee Annual Report 2021

Co-chairs: Angela Bedard-Haughn

Daniel Saurette

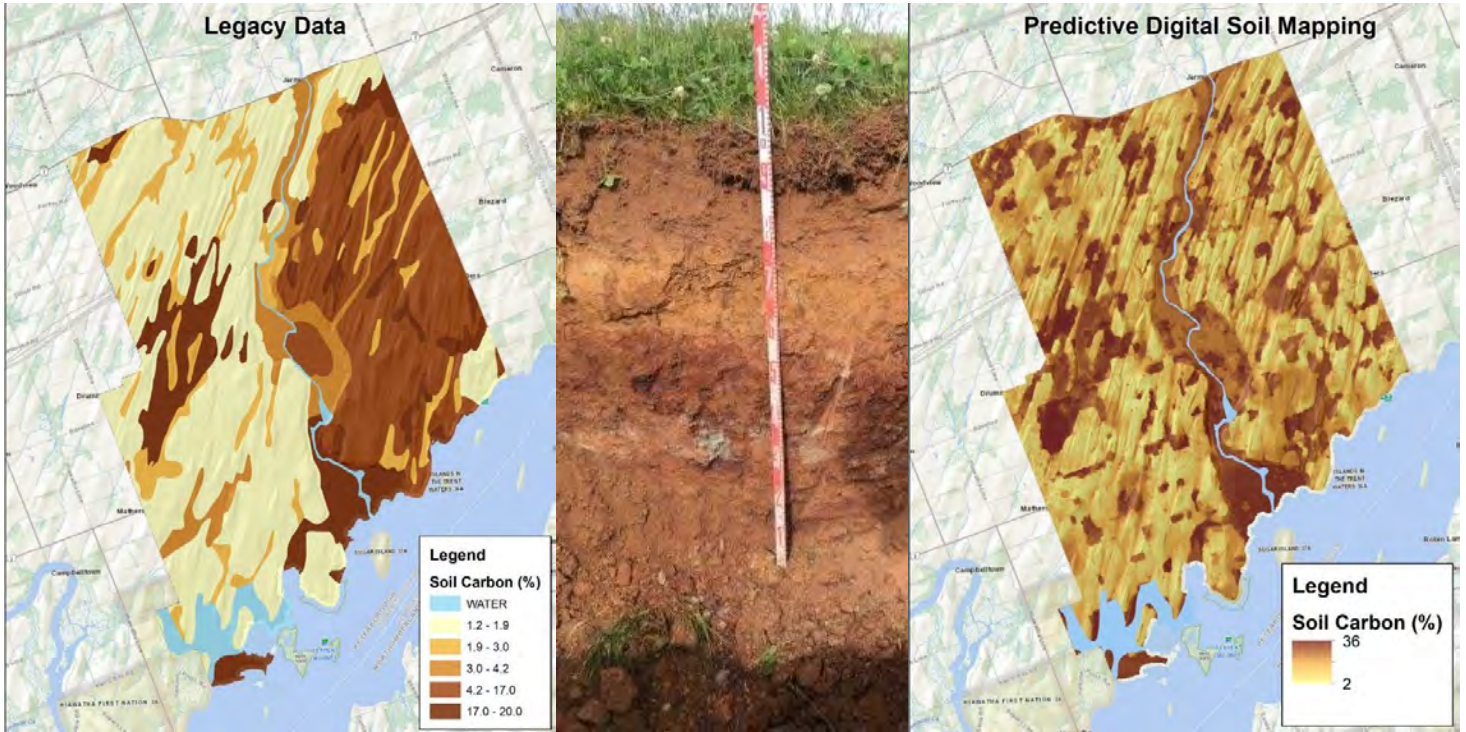
Secretary: Brandon Heung

1. The Pedology Committee and the Canadian Digital Soil Mapping Working Group (CDSMWG) organized and hosted a 2-day training event in 2020. The event was held August 17th-18th, 2020, and provided a 2-day virtual workshop titled “Introductory Workshop on Digital Soil Mapping”.
2. The Pedology Committee and the CDSMWG organized a 1-day online conference titled “Canadian Progress in Digital Soil Mapping”, held August 20th, 2020 and included 11 oral presentations from across Canada. The agenda and abstracts are attached to this report. The events were both well-attended by over 80 participants, including international participation.
3. The Pedology Committee continues to work towards acquisition of the publishing rights for the Canadian System of Soil Classification and eventual release of an updated version of the CSSC (version 4!).
4. The Pedology Committee and the CDSMWG are leading a Special Issue of the Canadian Journal of Soil Science. This spring saw the call for papers released for the special issue: Advances in Soil Survey & Classification in Canada. Guest editors are Brandon Heung, Angela Bedard-Haughn, Daniel Saurette and Chuck Bulmer. The information can be accessed at the Canadian Science Publishing website (<https://cdnsiencepub.com/do/10.1139/news.2021.04.05.02/full/>). There are 2 themes for the Special Issue:
 - a. Theme 1, the renewal of the Canadian System of Soil Classification, is seeking manuscripts that include research related to soil taxonomy in Canada, and proposals for additions or changes to the Canadian System of Soil Classification.
 - b. Theme 2, the application of predictive digital soil mapping techniques on Canadian landscapes, is seeking manuscripts that include research related to the application of technologies and spatial modelling techniques to generate predictive soil maps.

The submission deadline is October 29th, 2021. Related to Theme 1, Renewal of the CSSC, tomorrow's Concurrent Session 4 – Soil Taxonomy and Advances in Pedology is related to the Call for Papers, and many of the presentations we hope will highlight manuscripts that will be submitted to the Special Issue.

5. The PC co-chairs continue to work on funding opportunities for a national soils database to support predictive digital soil mapping and other applications.
6. Watch your inboxes for a Pedology Committee meeting later this summer for the 2021 year.
7. We expect to reconvene our working group on CSSC version 4 in the summer months ahead of the Special Issue.

Canadian Progress in Digital Soil Mapping Online Conference



Conference Program

August 20, 2020

9 – 12 pm Pacific Time | 12 – 3 pm Eastern Time

Sponsored by Canadian Digital Soil Mapping Working Group of the Pedology Committee, Canadian Society of Soil Science



CANADIAN SOCIETY OF SOIL SCIENCE
SOCIÉTÉ CANADIENNE DE LA SCIENCE DU SOL

Presentation Schedule

A cross-country tour of digital soil mapping activities.

Introductory Remarks: Brandon Heung & Daniel Saurette

Chuck Bulmer (BC):

Mapping soil carbon in the dry forests of interior British Columbia

William Bethel (BC & ON):

Comparing methods of using remote sensing data and machine learning to predict soil attributes in managed forests

Babak Kasraei (BC & ON):

Quantile regression as a generic approach for estimating uncertainty for machine-learning techniques used for digital soil mapping

Jeremy Kiss (SK):

Disaggregation of legacy soil survey maps in the agricultural region of Saskatchewan

Preston Sorenson (SK):

Soil sampling strategy optimization to support predictive soil mapping

Tahmid Huq Easher (ON):

Comparison of two disaggregation techniques (DSMART & Pure Polygon Disaggregation) using existing soil great groups polygon maps of six sub-watersheds at Lake Erie Basin, Ontario

Christopher Blackford (ON):

Incorporating uncertainty estimates into repeated sampling for digital soil mapping

Daniel Saurette (ON):

Comparing categorical and continuous approaches to predicting soil texture class

Farzaneh Heidari (QB):

Predicting physical characteristics of soil at multiple depths using machine learning

Siddhartho Paul (NS):

Understanding the dynamics of organic and active carbon in soil using digital soil mapping: A case study from the Faculty of Agriculture's campus farm, Dalhousie University

Fernando de Jesus Montaña Lopez (Mexico)

National-scale digital soil mapping of Mexico: A preliminary collaborative framework

Concluding Remarks: Announcements and Special Issue in Canadian Journal of Soil Science
“Advances in Soil Survey and Classification in Canada”

**Please support your soil science community and register as a member of the Canadian Society of
Soil Science!**

<https://csss.ca/become-a-member/>

Comparing methods of using remote sensing data and machine learning to predict soil attributes in managed forests

William Bethel,¹ Margaret G. Schmidt,¹ Brandon Heung,² Chuck E. Bulmer,³ Babak Kasraei,¹
Kevin Keys,⁴ Christopher Blackford⁵

¹ Department of Geography, Faculty of Environment, Simon Fraser University

² Department of Plant, Food, and Environmental Sciences, Faculty of Agriculture, Dalhousie University

³ British Columbia Ministry of Forests, Lands, Natural Resource Operations, and Rural Development

⁴ Nova Scotia Department of Lands and Forestry

⁵ Ontario Ministry of Agriculture, Food, and Rural Affairs

Abstract

Having detailed data about forests allows forest managers to make informed decisions about forest management. Using LiDAR data along with machine learning methods allows for field data to be extrapolated across a landscape. This study focuses on finding the best way to use LiDAR data and Random Forest to accurately predict soil moisture regime, nutrient regime, and soil type. Factors tested include the best method of filtering LiDAR data, methods of correcting data imbalance in the observed dataset, and a comparison between two different sites, one in Nova Scotia and one near Kamloops, British Columbia. Models using a wide array of covariates based on different filtering sizes for the base digital elevation model tended to be more effective than models based on any single filtering size. Methods of correcting data imbalance did not significantly improve results. Between the two areas observed, better results were found in the larger area, though this may be a result of data quality rather than a good comparison of the size of the areas.

Corresponding Author(s):

William Bethel (William_Bethel@sfu.ca)

Brandon Heung (Brandon.Heung@dal.ca)

Incorporating uncertainty estimates into repeated sampling for digital soil mapping

Christopher Blackford,¹ Brandon Heung,² Kara Webster³

¹ Ontario Ministry of Agriculture, Food, and Rural Affairs

² Department of Plant, Food, and Environmental Sciences, Faculty of Agriculture, Dalhousie University

³ Great Lakes Forestry Centre, Canadian Forest Service, Natural Resources Canada

Abstract

Digital soil mapping combines soil samples with environmental data to model continuous soil variation across a landscape. Digital soil map quality depends upon the amount and configuration of these soil samples throughout the study extent and in many cases successive sampling campaigns are undertaken to gather sufficient soil data. Digital soil maps can be created in between sampling events (e.g. between field seasons) to show uncertainty in the model predictions throughout the study extent. These uncertainty maps could inform future soil sampling events by guiding where to sample but it is unclear how much model improvement would be gained sampling in high uncertainty areas compared to other approaches. In this study, we simulate a successive soil sampling campaign to test if uncertainty maps can be used to identify important areas for additional sampling (i.e. locations that leads to greatest model improvement). We quantify model improvement upon the addition of soil datapoints from high uncertainty areas (as predicted by an initial digital soil map) compared to samples that are randomly spatially distributed. We show sampling in high uncertainty areas leads to greater model improvement than random sampling. We discuss how uncertainty could be incorporated in broader soil sampling protocols to incorporate adaptive sampling into long-term monitoring projects.

Corresponding Author(s):

Christopher Blackford (Chris.Blackford@Ontario.ca)

Brandon Heung (Brandon.Heung@dal.ca)

Mapping soil carbon in the dry forests of interior British Columbia

Chuck E. Bulmer,¹ Babak Kasraei,² Margaret G. Schmidt,² William Bethel,² Adrienne Arbor,²
Brandon Heung,³

¹ British Columbia Ministry of Forests, Lands, Natural Resource Operations, and Rural Development

² Department of Geography, Faculty of Environment, Simon Fraser University

³ Department of Plant, Food, and Environmental Sciences, Faculty of Agriculture, Dalhousie University

Abstract

We carried out description, sampling and laboratory analysis of soils from a forested area 50 km west of Kamloops BC, in order to estimate soil organic carbon (SOC) stocks. Samples were collected from 200 randomly located (with Latin hypercube) soil pits 30 cm deep, and from 46 randomly located road cuts. Samples were evaluated for organic and inorganic carbon, soil texture and other properties. Visual estimates and sieved samples were used to prepare estimates of coarse fragment content. Bulk density was estimated from organic matter content and soil texture. Random forest was used to prepare a predictive map of SOC stocks to 30 cm depth. The results from this study will be presented and compared with results from other soil carbon assessments in the forests of BC. The major soil and environmental factors affecting SOC distribution in this landscape will be discussed. The sensitivity of the results to a variety of input factors will also be presented. Finally, some of the challenging aspects of field data collection and sample analysis will be discussed as they may relate to other efforts to evaluate SOC in Canadian soils.

Corresponding Author(s):

Chuck Bulmer (Chuck.Bulmer@gov.bc.ca)

Comparison of two disaggregation techniques (DSMART & Pure Polygon Disaggregation) using existing soil great groups polygon maps of six sub-watersheds at Lake Erie Basin, Ontario

Tahmid Huq Easher,¹ Daniel D. Saurette,^{1,2} Emma Chappell,¹ Fernando Montaña-López,¹
Brandon Heung,³ Asim Biswas¹

¹ School of Environmental Sciences, University of Guelph

² Environmental Management Branch, Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph, ON

³ Department of Plant, Food, and Environmental Sciences, Faculty of Agriculture, Dalhousie University

Abstract

Traditional soil maps have one or multiple soil types in a polygon which restricts the machine learning applications to predict soils using those existing pedon data. Digital Soil Mapping (DSM) can disaggregate polygon-based maps to develop predictive digital soil maps with soil information in 3D with pedological descriptions for site-specific geographical locations, using the legacy maps. This presentation will be focused on comparing two different disaggregation techniques to disaggregate soil great group maps of six sub-watersheds at Lake Erie Basin. DSMART is a well-known user-friendly approach and can be performed using existing soil great group maps and environmental covariates. It disaggregates the polygons by taking existing polygon-based soils maps and correlating them with environmental covariates. DSMART uses stratified random sampling technique to select the same number of sample points randomly from each polygon. On the other hand, Pure Polygon Disaggregation is relatively a recent approach to disaggregate maps, which is developed through random sampling of single-component soil survey map units based on an area-weighted approach. In this approach, each soil observation is spatially intersected with the suite of soil-environmental covariates to develop training points. Then single-model and ensemble model learners are applied for prediction of soil great groups and order for point data. These two techniques will be applied to disaggregate the soil great group maps of six sub-watersheds at Lake Erie Basin, Ontario. Then they will be validated using existing data points and will be compared using statistical methods, to find out which approach suits better for the study areas. Also, this presentation will focus on the benefits and drawbacks of both disaggregation approaches and the potential of these model outputs to be used for site-specific soil properties modeling.

Corresponding Author(s):

Tahmid Huq Easher (thuqeash@uoguelph.ca)

Asim Biswas (biswas@uoguelph.ca)

Predicting physical characteristics of soil at multiple depths using machine learning

Farzaneh Heidari,¹ Maxime Ludec,¹ Marc-Olivier Gasser,² Abdoulaye Baniré,¹

¹ Bioinformatics Lab, Université du Québec à Montréal

² Institut de Recherche et de Développement en Agroenvironnement (IRDA)

Abstract

Soil is one of the critical environmental elements, and sustainable soil management is a global issue. Soil data is becoming increasingly available in farms, especially in Quebec where agricultural producers are required to carry out soil analyzes every 5 years for environmental reasons. This data opens important research opportunities at the intersection of machine learning and soil science. Machine learning is increasingly used to infer statistical patterns in soil data. Understanding these patterns can help the producers to improve the health of soil, accordingly increase the crop yield and develop long-term climate change resilient strategies. Therefore, the analysis of soil parameters (chemical and physical) is crucial for a sustainable agriculture and future interventions in the environment. One of the challenges of evaluating soil health parameters is the longitudinal limitations of the farm data. The objective of this project is to estimate physical properties of soil (bulk density, total porosity; macro-porosity, hydraulic conductivity) at different depths using commercial soil chemical analysis, soil texture from the top layer and crops. A data set from a Quebec soil survey of 1990 including ~18000 samples at three different depths is used. We de-signed a multi-task learning framework to predict the soil properties at three horizons of the soil simultaneously. This framework shares computation between the tasks using shared layers in the neural network. Various machine leaning techniques (Linear/ Ridge regression, Decision Trees and KNN) have been compared to our proposed multi-task learning framework. Our preliminary results demonstrates that our framework outperforms classical ones in most targets.

Corresponding Author(s):

Farzaneh Heidari (Farzana.Heidari@gmail.com)

Quantile regression as a generic approach for estimating uncertainty for machine-learning techniques used for digital soil mapping

Babak Kasraei,¹ Brandon Heung,² Daniel Saurette,^{3,4} Margaret G. Schmidt,¹ Chuck E. Bulmer,⁵
William Bethel,¹

¹ Department of Geography, Faculty of Environment, Simon Fraser University

² Department of Plant, Food, and Environmental Sciences, Faculty of Agriculture, Dalhousie University

³ Environmental Management Branch, Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph, ON

⁴ School of Environmental Sciences, University of Guelph

⁵ British Columbia Ministry of Forests, Lands, Natural Resource Operations, and Rural Development

Abstract

Soil properties are highly variable in space and time, which introduces uncertainty when making predictions with respect to the about true properties and processes. Being aware of this uncertainty and quantifying it will prevent us from making poor decisions. Uncertainty in digital soil mapping (DSM) includes both model error and spatially explicit (local) uncertainty. In DSM, local uncertainty is represented using prediction interval (PI) maps and according to international standards, all digital soil maps should be accompanied by 90% PI maps. Although there are several uncertainty assessment methods in DSM, many approaches are not applicable when using machine learning (ML) approaches. For example, geostatistical approaches may only be applied to Kriging; bootstrapping is computationally limited; and Monte Carlo simulations only assess a single source of uncertainty. To address this, a novel uncertainty framework is introduced using quantile regression (QR). The objectives of this presentation are (1) to develop and validate soil attribute maps using contrasting ML techniques; (2) to generate 90% PI maps using the QR framework; and (3) to assess the uncertainty estimations using metrics such as mean prediction intervals (MPI) and prediction interval coverage probability (PICP). In this study, four ML models (Cubist, Random Forest, support vector machine, and k-nearest neighbours) were trained, and maps were trained, soil maps were produced, and validation was carried out using a 10-folds nested cross validation method. Using QR, 90% PI uncertainty maps were produced and the quality of the performance of each ML method was quantified using MPI and PICP. The results showed that the performance of RF was the best among the ML models and quantification of uncertainty using QR was accurate for modelling soil thickness in all four ML methods, showing the capability of the QR method in quantification of uncertainty in DSM.

Corresponding Author(s):

Babak Kasraei (bkasraei@sfu.ca)

Brandon Heung (Brandon.Heung@dal.ca)

Disaggregation of legacy soil survey maps in the agricultural region of Saskatchewan

Jeremy Kiss,¹ Preston Sorenson,¹ Angela Bedard-Haughn¹

¹ Department of Soil Science, College of Agriculture and Bioresources, University of Saskatchewan

Abstract

There is a need for soil information of higher spatial resolution than the legacy soil surveys to support precision agricultural management in Saskatchewan. The legacy soil surveys are an excellent resource for understanding general soil characteristics for a region, but they are too coarse in scale to support field-scale management. Disaggregation techniques allow this resource to be leveraged to generate more detailed soil maps that can inform the delineation of soil management zones. The Saskatchewan legacy soil survey is particularly well suited to use for disaggregation because (1) the survey typically describes on which slope positions the soil classes are found and (2) the survey map units include, not only the modal soil classes, but those found at the limits of the soil catenas (e.g. Regosols on upper slopes and Gleysols in depressions). The soil class – landscape relationships were captured in the disaggregation methodology by (1) parsing out the relationships from the survey map unit descriptions and (2) incorporating landform segmentation using LandMapR (MacMillan et al., 2000, Fuzzy sets and systems 113:81-109). This study found that high-resolution digital elevation models are essential to successfully capture these soil – landscape relationships and produce meaningful disaggregated soil class maps in Saskatchewan landscapes.

Disaggregation and Harmonisation of Soil Map Units Through Resampled Classification Trees (DSMART) (Odgers et al., 2014, Geoderma, 214:91-100) is a commonly used survey disaggregation approach but it is computationally intensive. This study found that the modified random forest approach proposed in Møller et al. (2019, Geoderma, 341:148-160) achieved similar predictive accuracies as the DSMART approach but could be executed in a fraction of the time.

Corresponding Author(s):

Jeremy Kiss (Jeremy.Kiss@usask.ca)

National-scale digital soil mapping of Mexico: A preliminary collaborative framework

Fernando Montaña Lopez,¹ Mario Guevara,² Daniel D. Saurette,^{1,3} Tegbaru Bellete,¹ Asim Biswas¹

¹ School of Environmental Sciences, University of Guelph

² Department of Plant and Soil Sciences, University of Delaware, Newark, DE, USA.

³ Environmental Management Branch, Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph, ON

Abstract

Digital soil mapping (DSM) around the world has generated meaningful soil spatial data in different regions, specially in highly developed countries where strong efforts have been undertaken. This is mainly due to the availability of human, computational and environmental assessment resources. However, for less developed countries such as Mexico, DSM has not been fully explored. Few attempts include surficial pH, soil depth and soil organic carbon (SOC) modelling. In spite of many endeavors towards the preparation of soil and environmental data, modelling tools are still required to generate better assessments of spatial distribution of soil properties at national scale. As the demand for digital soil map products increases around the globe, Mexico lacks a structured plan at a federal level. There are many institutions in charge of collecting environmental data such as INEGI, CONABIO, the Ministry of Agriculture and universities, as a result their main issue is the lack of a transorganizational scheme to cooperate in this important task. Here we propose a new collaboration framework to make more progress in digital soil mapping for Mexico at national and regional scales. The suggested framework includes stronger communication between involved parties, data sharing strategies and the addition of foreign-built expertise to restructure the existing framework, characterized by uncertain science, diverse stakeholders, and difficult trade-offs. Our objective is to bring resources together to keep contributing to global DSM efforts such as those led by FAO and to build new continental programs.

Corresponding Author(s):

Fernando Montaña Lopez (fmontano@uoguelph.ca)

Asim Biswas (biswas@uoguelph.ca)

Understanding the dynamics of organic and active carbon in soil using digital soil mapping: A case study from the Faculty of Agriculture's campus farm, Dalhousie University

Siddhartho S. Paul,¹ Brandon Heung,¹ Derek Lynch¹

¹ Department of Plant, Food, and Environmental Sciences, Faculty of Agriculture, Dalhousie University

Abstract

Soil organic carbon (SOC), a key soil health indicator plays a critical role for optimum crop productivity and climate regulation. In the SOC pool, active carbon, usually measured as permanganate oxidizable carbon (POXC) is a sensitive carbon fraction that can quickly alter in response to changes in the cropping system (Culman et al., 2012. Soil Sci. Soc. Am. J., 76: 494-504). Therefore, site-specific assessment of SOC and POXC is crucial for effective and sustainable farm management. Yet, spatially explicit monitoring of carbon dynamics in the soil is a consistent challenge given the inherent heterogeneity of soil and the high cost of soil analysis. Digital soil mapping (DSM) serves as a unique technique for low-cost monitoring of soil carbon dynamics over time and space. We conducted a landscape-scale analysis in a 37 km² area, containing contrasting sandy and silty soils, in and around Dalhousie University's Agricultural Campus to map SOC and POXC using two machine learning models – Random Forest and Cubist. We utilized topographic indices derived from Light Detection and Ranging (LiDAR) data and supplemented it with soil survey data, Agriculture and Agri-Food Canada (AAFC) crop inventory data, and soil and vegetation indices developed from Landsat imagery to predict SOC and POXC in 2019. The Random Forest model marginally outperformed Cubist with concordance correlation coefficient ranging from 0.74 to 0.77 for SOC and from 0.51 to 0.55 for POXC. Interestingly, Landsat indices derived from pre- and post-growing season (when soil is exposed) imagery strongly contributed to the prediction of both soil properties while AAFC crop inventory data was one of the dominant predictors of active carbon. We also found that soil texture was not a strong determinant of soil carbon in our study site. The SOC and POXC in the area range from 1.21-3.09% and 0.03-0.08% (i.e. 2.5-2.6% of SOC), respectively. The results of our analysis highlight that DSM can provide an effective means for modeling soil carbon dynamics in the agricultural landscapes.

Corresponding Author(s):

Siddhartho Paul (Siddhartho.Paul@gmail.com)

Comparing categorical and continuous approaches to predicting soil texture class

Daniel D. Saurette,^{1,2} Jim Warren¹

¹ Environmental Management Branch, Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph, ON

² School of Environmental Sciences, University of Guelph

Abstract

Soil texture class can be predicted directly using a categorical digital soil mapping (DSM) approach or can be predicted by first training continuous models for sand, silt and clay content, and converting the continuous rasters to texture class. In this study, we compare these two approaches using a model suitable for both approaches: random forest. Soil particle size data for the soil profiles of the Ottawa Study Area (n=1642) were harmonized to *GlobalSoilMap.net* standard depth intervals of 0-5, 5-15, 15-30, 30-60 and 60-100cm. The harmonized data was then used as the basis for both categorical and continuous modeling approaches. In the categorical approach, particle size fraction (PSF) data was used to determine soil texture class at each depth increment. These data were then combined with environmental covariates to create the regression matrix as input for the random forest model. We used a 70-30 split of the data where the 30% hold-out was used only in validating the predictive models. Model training was completed in *caret* package using 10 repeats of 10-fold cross validation. In the continuous approach, since PSF data are compositional, we applied the additive log ratio (*alr*) to the data using silt as the denominator to train models on *alrSand* and *alrClay*. Trained models were then used to create predicted rasters of *alrSand* and *alrClay*, which are subsequently converted to sand, silt and clay raster by applying the inverse *alr*. Model training was the same as for the categorical approach, and the 30% hold-out was identical to ensure a fair comparison between the approaches. Goodness of fit statistics for the continuous models are generated by converting the observed and predicted *alr* data for the validation dataset back to original units of percentage sand, silt and clay. Lin's concordance correlation coefficient (CCC) ranged from 0.60 to 0.70, 0.60 to 0.69 and 0.42 to 0.59 for sand, clay and silt across the five depths of prediction. After converting the continuous data to texture classes, we evaluated the Overall Accuracy and kappa statistics, which ranged from 25 to 38 and 0.15 to 0.27, respectively, across the five depths. In comparison, the categorical predictions yielded slightly better scores, with Overall Accuracy ranging from 30 to 36, and kappa ranging from 0.18 to 0.25. These results suggest that both techniques are suitable for predicting texture class; however, based on the high CCC for the continuous predictions, the resulting categorical fit statistics from conversion of sand silt and clay to texture class were lower than expected.

Corresponding Author(s):

Daniel Saurette (Daniel.Saurette@ontario.ca)

Soil sampling strategy optimization to support predictive soil mapping

Preston Sorenson,¹ Jeremy Kiss,¹ Angela Bedard-Haughn¹

¹ Department of Soil Science, College of Agriculture and Bioresources, University of Saskatchewan

Abstract

The importance of soil data has been acknowledged by policy makers in Canada. Specifically, there is a need to develop tools to support predictive soil mapping that will fill the current soil data gap by using the data routinely collected by producers and their agronomy team. Specifically, these tools include using modern machine-learning based approaches that have surpassed tacit knowledge and heuristic based approaches.

Currently, one of the key methodology gaps is determining the amount of sample points required to support predictive soil mapping and assessments. While there has been research conducted on this subject, most of this work has focused on sampling strategies to completely characterize the statistical variability in the landscape. There is still a gap in the literature regarding how much sampling is economically optimal and practical, specifically in the context of the Canadian Prairies.

This work is focused on developing sampling strategies based on a modified conditioned Latin hypercube design that incorporates economic factors to determine the economically optimal sampling strategy to support predictive soil mapping. This missing piece in the literature is one of the key obstacles preventing widespread application of predictive soil mapping, as the accuracy and utility of spatial information generated from predictive soil mapping is directly influenced by the soil data collected for use as training data for predictive models.

Overall, preliminary results from this study have shown that the optimal amount of data is somewhat sensitive to fertilizer prices and very sensitive to crop prices. For a specific test site, the optimal number of data points was approximately 45 for a quarter section (160 acres / 65 hectares) at 10-year average fertilizer and crop prices.

Corresponding Author(s):

Preston Sorenson (prs352@mail.usask.ca)

**CANADIAN JOURNAL OF SOIL SCIENCE EDITOR-IN-CHIEF REPORT
CANADIAN SOCIETY OF SOIL SCIENCE ANNUAL GENERAL MEETING**

Dr M Anne Naeth

June 7, 2021

1. Editorial Board, Canadian Science Publishing, Reviewers

Our Associate Editors make the Canadian Journal of Soil Science possible, and contribute significantly to its development and reputation.

Thank you to Associate Editors that ended their terms in 2020 for their dedicated service to our journal: Drs Tandra Fraser and Noura Ziadi.

Thank you to the Associate Editors who extended their time with our journal: Drs Jean-Phillipe Bellenger, Asim Biswas, Sheng Li, Aime Jean Messiga, Fereidoun Rezanezhad, Ben Thomas, Mohammad Valipour, and Andrew Vanderzaag.

Welcome to our new Associate Editors: Drs Henry Chau, Mozghan Sepehri, Karen Thompson, Jim Warren, and Joseph Yavitt.

The support, professionalism, and expertise provided by the Canadian Science Publishing staff are highly appreciated. Thank you to Judy Busnarda, Director, Publishing Operations; Jacqueline Costigan, Scientific Publishing Editor; Tamer Elbokl, Managing Editor, Biological and Environmental Sciences; Hannah Hatherill, Graphic Designer; Curtis Rafter, Scientific Publishing Editor; Laurie Scott, Editorial Assistant; Josephine Sciortino, Managing Editor, Life Science +; Tushar Shakya, Director, Business Development and Strategy; and Melanie Slavitch, Peer Review Manager.

We gratefully acknowledge all of our peer reviewers and thank them for their valuable contributions to publication of our journal.

Congratulations to our outstanding reviewers for 2020: Dr Miles Dyck, University of Alberta; Dr Martin Entz, University of Manitoba; and Dr Bernard Gagnon, Agriculture and Agri-Food Canada. We are grateful for their consistent and expeditious delivery of comprehensive, discerning reviews to the authors of our journal submissions.

2021 Editorial Board

Editor-in-Chief: Dr M Anne Naeth

Associate Editors: Drs Jean-Philippe Bellenger, Asim Biswas, Henry Chau, Claudia Goyer, Maja Krzic, Sheng Li, Aimé Jean Messiga, David Pelster, Lori Phillips, Fereidoun Rezanezhad, Mervin St Luce, Mozghan Sepehri, Ben Thomas, Karen Thompson, Mohammad Valipour, Andrew Vanderzaag, Jim Warren, Joseph Yavitt, Wei Zhang, Xining Zhao.

We have three Associate Editors with terms ending in December 2021, and six with terms ending in December 2022. Let me know if you are interested in joining the Editorial Board, or if you know of someone we should consider inviting.

Reviewers for all areas of our research continue to be difficult to procure. If you are interested in being listed as a reviewer for our journal, or if you know someone we should consider for reviews, let me know. As members of the Canadian Society of Soil Science, if we each committed to review at least one paper a year for our journal, we could speed up the review process and enhance the quality of our journal.

2. Journal Metrics, Statistics

The journal's two year impact factor is currently 1.171; up from 0.949 in 2019, but below our most recent high of 1.590 in 2016. The five year impact factor is currently 1.418; dropping from 1.633 in 2019 and from 1.934 in 2017.

Our ranking among soil science journals is dropping slightly after being relatively steady from 2013 to 2016, then increasing to 2019. Total citations are increasing slowly. Other metrics are decreasing slightly or remaining stable, such as eigenfactor (% of time library users spend with the journal) and article influence score. Overall we are remaining relatively steady but I would like to see growth in all of our metrics to enhance overall journal quality.

Our current turnaround time to first decision is 48 days, down from 55 the past two years. This is good, as it is a major factor for journal submissions. We can improve this further to be competitive, which is why we have a larger number of Associate Editors than in previous times.

Submissions to our journal are around 160 in most years. We have 70 submissions to date in 2021. We currently have 36 accepted manuscripts, 31 rejected manuscripts, and 1 withdrawn manuscript; including special issue manuscripts. Since our annual publishing target is 67, we are behind in acceptances. The quality of the submissions has declined in the past year, keeping our rejection rate greater than 50%. Highest acceptances come from Canada, lowest from China and other Asian countries, Africa, and Latin America.

Main reasons for rejection without review were flaws in the experimental design, insufficient data to support conclusions, lack of relevance to the journal. Of the manuscripts sent for review, the main reasons for rejection were lack of novelty or insufficient improvement of a manuscript based on peer review comments. What constitutes novelty in journal publications tends to be subjective among Associate Editors and among journals. It could be an interesting short communication for someone to develop and publish in our journal.

3. Special Issues, Reviews

Special issues and reviews are of critical importance for a journal as they contribute significantly to improvements in citations and impact factors.

We had one special Issue for 2020 entitled 100 years of soil science at the University of Alberta. Thank you to Guest Editors Bill McGill and David Burton for their work on this special issue.

We have three special issues in progress. Biochar amendments for sustainable soil management is scheduled for 2021. Soil health evaluation: methods and directions; and Advances in soil survey and classification in Canada, are both scheduled for 2022.

Future special issues are needed and are being actively recruited. Please let me know if you have interest and ideas to discuss for special issues as we should soon be scheduling for 2023.

We have no reviews in progress and I am actively seeking authors to commit to reviews on timely topics. The most read and cited article for several years is a review on the role of amendments in soil reclamation, by FJ Larney and DA Angers, published in a special issue on land reclamation in 2012. Other reviews over the years rank highly in citations and reads.

Methods articles also rank high in reads and citations. These include a 1995 article on calculating organic matter and nutrients in stored soils by BH Ellert and JR Bettany, and a 2005 article on ashing methods by MW Ali, C Zoltai, and FG Radford. Perhaps a special issue on some aspects of improved methods or methods comparison would be of interest.

4. Scope, Articles

Last year we updated our journal scope to better reflect the areas we are interested in publishing. We edited that slightly this year.

Current scope: Published since 1921, this quarterly journal contains new research on all areas of soil science, including use, management, properties, and development of soils. It draws from and interfaces with numerous fields, including agriculture, agrometeorology, contaminant remediation, ecology, environmental science, environmental stewardship, forestry, geography, geology, hydrology, land reclamation, landscape processes, microbiology, soil-plant interactions, and urban uses. The journal publishes regular articles, reviews (and mini-reviews), letters to the editor, discussions (comments and replies), and short communications. The journal publishes special issues discussing hot topics in the field of soil science and occasionally conference proceedings.

We clarified our short communications requirements and better explained the types of articles we consider for publication. Brief reports of important findings might contain research results that are complete but characterized by a limited area or scope of investigation, descriptions of new or improved techniques or equipment including data or performance information, and critical perspectives on a topic of current interest.

5. Journal Cover Photos

We need four good quality photos for regular journal cover pages each year. Cover photos are also for any special issues.

We are currently running a graduate student competition to address the lack of photo submissions from authors. We have had two winners, and Ericka will give you a little more information on them in her report. The deadlines for submission of photos are November 27, February 25, May 26, and August 27 each year.

6. Memorandum Of Understanding With Canadian Science Publishing

We recently developed a new memorandum of understanding to confirm the partnership between Canadian Science Publishing and the Canadian Society of Soil Science and our joint commitment towards publishing the Canadian Journal of Soil Science.

Canadian Science Publishing is responsible for business and publishing decisions for our journal, including pricing, business models, peer review, production, and distribution services. We share responsibilities for marketing and promotion to increase journal content submissions and awareness.

Canadian Science Publishing contributes financially to the Canadian Society of Soil Science each year, in support of marketing and promotions, conference activities, sponsorships, exhibits, student and keynote speaker travel awards to society meetings, and annual awards. Society members receive reduced page charges (66% of non-member price), reduced immediate open access fees, and a special subscription rate. The Canadian Society of Soil Science logo with appropriate text appears on our journal website, and we get free society advertising in newsletter and social media platforms

The Canadian Society of Soil Science is expected to promote and recognize the Canadian Journal of Soil Science as our official journal.

The Executive Editor-in-Chief of Canadian Science Publishing appoints the Editor-in-Chief of our journal, seeking recommendations and advice from the Canadian Society of Soil Science and the current Editor-in-Chief.

7. Actions For Improving Canadian Journal Of Soil Science

To enhance our journal's reputation we need to attract excellent quality research and to attract that research we need to improve our metrics, particularly impact and turn around time. A bit of a circular process, but doable with the help of our Canadian Society of Soil Science members.

Work proactively with Canadian Science Publishing to develop and promote our journal, ensuring it continues to attract and publish world class research and remains a high caliber research publication.

Actively solicit regular manuscripts, short communications, review papers, and special issues on important and timely topics, and from recognized researchers in their fields.

Incentivize Canadian Society of Soil Science members to consider the Canadian Journal of Soil Science an important journal for their work.

Promote the journal to graduate students.

Include international associate editors, to raise our international profile.

Recognize contributors with an editor's choice article in each issue, and annual outstanding reviewers.

Eliminate page charges for a number of graduate student publications, introducing them to the journal early in their careers.

Eliminate page charges for Canadian Society of Soil Science professors emeritus and retired submitters, and encourage them to write review articles and guest edit special issues.

Activate a subscription model for Canadian Society of Soil Science members to get the journal in front of more researchers, including graduate students.

Promote the journal at every opportunity including scientific meetings, webinars, society webpages, and other platforms.

Solicit information from our society members on what they would like to see in the journal to make it more appealing to them.

2021 CSSS student representative report

Submitted by Erika H Young

Canadian Journal of Soil Science (CJSS) student photo contest winners

There has been two CJSS student photo contest winners in 2021. Raphaël Deragon of Université Laval and Richard Tingskou of Memorial University of Newfoundland.

Raphaël Deragon



CJSS cover photo: Volume 101, Issue 1 (March 2021).

“Mon projet de recherche porte sur la conservation des sols organiques cultivés du sud-ouest de Montréal. Avec une tarière Macaulay, j’ai extrait cet échantillon d’une couche OcoK selon le Guide Canadien de classification des sols (couche limnique effervescente). Sur la photo, on peut y voir un coquillage sur un matériau coprogène qui se trouvait entre 1,2 et 1,49 m de profondeur. Selon les taux d’accumulation connus pour les sols organiques, cela signifie que ce coquillage data de plusieurs centaines d’années.”

“I am working on organic soils conservation in the south-west plain of Montreal. With a Macaulay sampler, I extracted this soil sample of a OcoK layer according to the Canadian System or Soil Classification (effervescent limnic layer). The picture shows a shell resting on a

coprogenic soil at a depth between 1.2 to 1.46 m. With known rates of accumulation in organic soils, this means that the shell has been there for a couple hundred years.”

This photograph was taken while Raphael was a graduate student working under the supervision of Dr. Jean Caron in the Faculté des sciences de l’agriculture et de l’alimentation.

Richard Tingskou



CJSS cover photo: Volume 101, Issue 2 (June 2021).

“The photo was taken while surveying a newly converted agricultural site outside of Deer Lake in western Newfoundland. The picture shows an intact boreal podzol recognized by the ash like eluvial layer on top of an iron red B horizon. The photo captures the success in preserving soil horizons after significant land conversion but provides cautionary evidence for future management decisions. When I took up my shovel I was initially really impressed to see intact soil layers. Typical conversion events are much more destructive and typically leave an exposed B horizon. This site was different, there was intact A horizon that even had remnants of an organic or duff layer. After the initial shock had worn off I began to think of the vulnerability of this soil. A soil of mostly sand and silt, low in organic matter (~2%), bare, in a highly precipitous environment, sloping with erosion potential. I could see how management decisions could either create a sustainable agro ecosystem or destroy a now vulnerable environment. I took the picture so that discussions could be started that focus on how boreal ecosystems can sustainably contribute to food security.”

Richard is from Winnipeg Manitoba and works with Dr. Adrian Unc at Memorial University in Newfoundland and Labrador. His M.Sc. research focuses on nutrient cycling, land conversion, and waste utilization in a space where agricultural land and activities are expanding.

Latest CJSS photo contest

Photos are now being accepted for the CJSS student photo contest that ends on **August 26th, 2021**. The top submission will receive a \$125 cash prize, and the winning photograph will be featured on the cover page of the CJSS and on the CSSS website.

Students may submit images that meet the following specifications:

- Image should focus on some aspect of soil science to reflect CJSS content.
- Image size and resolution at least 8.5" x 11" at 300 dpi or better.
- No collages; one single image only.
- Image in focus and not blurry.
- No people in photograph.
- No manipulation or heavy editing of photo required.
- No cell phone photographs.
- Acceptable image formats are jpg, png, tif.

Each student may submit more than one photograph. All entries should be sent to: M. Anne Naeth (anne.naeth@ualberta.ca) and Erika H. Young (ehyoung@grenfell.mun.ca).

2021 CSSS annual conference student trivia session

The CSSS student representative is hosting a student trivia session at the 2021 CSSS annual conference on June 8th, 5:45 ADT. Trivia is open to all undergraduate and graduate students, and postdocs attending the conference. There will be door prizes and prizes for the winners! Please email the CSSS graduate representative, Erika Young ehyoung@grenfell.mun.ca to sign up. Students can sign up until the time of the event. A zoom link will be sent to all participants before the day of the session and again shortly before the session begins.

2021 Western Councilor’s Report

The redesign of the CSSS website (initiated in 2020) to modernize the site and make it easier to navigate was completed. This included updates to our WordPress license to take advantage of enhanced security features, and also:

- addition of the CSSS Anti-racism Statement to the homepage
- a *What’s New* news banner was added to the top of the homepage
- links to the Graduate Student Photo Contest were added in the *Quick Links* section of the navigation menu

I would like to thank our webmaster, Shirley Ho, for her efficient (and enthusiastic) work on the website, and her patience in answering my questions about coding.

The primary activity of the Western Councilor during the period from June 2020 through June 2021 was the update of the CSSS website, starting shortly after the conclusion of the 2020 *Virtual* AGM. Updates to the CSSS website included:

- Recipient of the CSSS Fellow Award (Dr. David Burton)
- Photographs of the award winners were loaded to replace those from the previous year
- Minutes from the 2020 AGM were uploaded to the site
- The CSSS Communications Plan approved at the 2020 AGM was uploaded to the site
- July and December 2020 Newsletters
- March 2021 Newsletter

The website was updated to reflect the results of the fall 2020 election the new President-elect (Asim Biswas) and Student Representative (Erika Young), the reappointment of the Eastern Councilor (Louis-Pierre Comeau), and the appointment of the new Secretary (Leann Nelson) and Treasurer (Diane Knight). The website also was updated to note the transition of Angela Bedard-Haughn from President-elect to President and of Nate Basiliko from President to Past-president. Note: there was no change to the Western Councilor (Rich Farrell) or CJSS Editor-in-Chief (Anne Naeth).

Updated the Society’s Wikipedia page.

The major initiative undertaken in 2021 was implementation of the CSSS Social Media strategy that was approved during the 2020 AGM. Implementation of the strategy has been led by Samantha Fowler (the CSSS Communications Manager), and we are now operating on three social media platforms (Twitter, Facebook, and LinkedIn). Samantha develops the content in consultation with Nate and myself, and we meet quarterly or more often at Samantha’s request. Blog posts featuring graduate student research are especially well received and, overall, we have exceeded our goals for all three social media platforms:

Platform	Goal	Where we’re at
	----- No. of followers -----	
Twitter	450	1,123
Facebook	100	168
LinkedIn	100	116

Requests from several members for items needing to be posted (e.g., graduate student & postdoctoral opportunities, as well as several faculty positions) were received and processed.

Listserves (i.e, discussion groups) for the Soil Pedology and Soil Education Committees were added to the website and are available through the *Quick Links* for the two committees.

Information regarding several upcoming conferences was uploaded to the CSSS website:

- *2021 CSSS Annual Meeting*: June 21–25, 2020 (Charlottetown, PEI)
- *EUROSOIL 2021*: August 24-28, 2020 (Geneva, Switzerland)
- *3rd Global Soil Biodiversity Conference*: November 1–3, 2021 (Dublin, Ireland)
- *2021 ASA-CSSA-SSSA International Annual Meeting*: November 7–11, 2020 (Phoenix, AZ)

The status of these conferences is updated on a regular basis.

The application form for the Student Travel Award (for travel to an International conference) was updated for 2021.

Projects under development include developing a *Membership Directory* and setting up email accounts for Council members that will allow us to maintain an archive of internal communications as membership in Council changes. I am also working with the Treasurer (Diane Knight) to develop a *Sponsorship / Advertising Strategy* for the CSSS.

Lastly, this is my last Western Councillor's report and I'd like to thank all the Council members with whom I've worked (which includes four President's; two Secretaries, Treasurers, and Eastern Councillors; three Graduate Student representatives; and two CJSS Editors-in Chief) for their cooperation and encouragement, and for putting up with my relentless editing ;-). It has been a pleasure working with you all . . . I only wish I had done it earlier in my career.

Rich Farrell, Western Councillor

2021 Eastern Councillor report: Dr. Louis-Pierre Comeau

Since Louis-Pierre Comeau started winter (2018-2019), 7 newsletters were published (Spring 2019; summer 2019; fall 2019; winter 2020; spring 2020, fall 2020 and Spring 2021).

Louis-Pierre's goal is to publish 3 newsletters per year.

The next edition is planned for July 2021 to cover the 2021 CSSS annual meeting. Louis-Pierre encouraged submissions to the newsletter, especially soil science enthusiasts and from students.

He encourages supervisors to motivate their students to participate in the CSSS. Louis-Pierre is presently seeking suggestions for the next newsletter.

The Eastern Councillor is participating in the CSSS social media project and the bid to host the World Congress of Soil Science in Toronto.

Louis-Pierre Comeau is responsible to handle questions, suggestions from members of Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador.

Louis-Pierre can also serve as Councillor contact person for the French speaking members.

RULES AND GUIDELINES REGARDING CONDUCT OF THE AFFAIRS OF THE CANADIAN SOCIETY OF SOIL SCIENCE (CSSS) UPDATED MARCH 2021

1. Precedent of this Document

Governance of the CSSS is based in sequence on the act¹ then the by-laws²; with the act and the by-laws taking precedent over any rules or guidelines herein. Definitions and interpretations specified in the act and by-laws apply to this document. This document shall be updated and ratified by the board at the beginning of each calendar year. New rules and changes will be effective upon ratification by the board, and subject to final ratification or rejection by membership at the annual general meeting. The current version of this document shall be filed at the CSSS business office and posted on the CSSS website, and made available upon request to any CSSS voting member at any time. All members shall be made aware of its existence.

¹Act means the *Canada Not-For-Profit Corporations Act* S.C. 2009, c. 23 including the Regulations pursuant to the act, and any statute or regulations that may be substituted, as amended from time to time; <https://laws.justice.gc.ca/eng/acts/c-7.75/>.

²By-laws to conduct of the affairs of CSSS Inc; <http://csss.ca/wp-content/uploads/CSSS-By-Laws-2014.pdf>.

2. Definition of Board, Council, Directors and Councillors

The by-laws indicate the number of board members is to be “determined from time to time by the members by ordinary resolution or, if the ordinary resolution empowers the directors to determine the number, by resolution of the board.” A majority of councillors entitled to vote at a council meeting constitutes a quorum (a nine member council has a quorum of five). The board is known as the council and directors as councillors; these terms are considered synonymous. In this document, the terms council and councillor refer exclusively to the board and directors as defined in the by-laws.

3. Election of Councillors

The president-elect, graduate student councillor and two councilors (eastern and western) shall be chosen by election by the members of the society (or by acclamation if only one candidate is nominated). The term of the president-elect shall be one year, followed by one year as president and one year as past-president. These terms are non-renewable. One councillor shall be chosen each year alternately from the members of eastern and western Canada. The eastern and western councillor terms shall be two years, renewable for a second two year term to a maximum of four years. The graduate student councillor shall be elected by CSSS student members only. The term of the graduate student councillor shall be one year, renewable to a maximum of two years, as long as the student remains enrolled in a graduate program.

The secretary shall issue a call for nominations to members via the CSSS business office from 21 to 60 days before ballots should open (usually mid-October). Nominations shall be made with consent of the nominee and must be signed by three members. The time period to receive nominations shall be a minimum of 21 days. If nominations are not received another election shall be initiated. Elections shall be conducted on the single transferable voting system, by ballot using electronic mail transmission. Ballots shall remain open for 14 days after sending to members. Ballots shall be received and tabulated by the CSSS business office and forwarded to the secretary for review.

4. Appointment of Officers

The secretary, treasurer and editor in chief of the Canadian Journal of Soil Science (CJSS), are appointed

as officers, but are also councillors and thereby have voting rights on council. The term of secretary shall be three years, renewable for a second three year term to a maximum of six years. The term of the treasurer shall be three years, renewable for a second three year term to a maximum of six years.

Choosing the CJSS editor in chief shall be based on the current memorandum of understanding between Canadian Science Publishing (CSP, The Publisher) and the CSSS. The outgoing editor in chief in consultation with CSSS council shall recommend a new editor in chief. This person shall be subsequently appointed by the council as a voting member. The editor in chief must be a member of the CSSS. The term and other conditions are dictated by the current memorandum of understanding between CSP and the CSSS.

5. Roles of Councillors

The by-laws allow that specific roles be assigned to councillors, and the councillors of the council shall be:

- President-elect elected by CSSS members with a one year term, to become the president the next year.
- President from president-elect of the previous year, to serve as chair of the council with a one year term.
- Past-president, from president of the previous year, to serve as vice chair of council, with a one year term.
- Secretary, appointed by council as an officer of council with a three year term.
- Treasurer, appointed by council, as an officer of council with a three year term.
- Eastern councillor, as elected by all CSSS members with a two year term.
- Western councillor, as elected by all CSSS members with a two year term.
- Graduate student councillor, as elected by CSSS student members with a one year term
- Editor in chief of the CJSS, if appointed as an officer of council.

6. Registrar, Office Manager

Council may appoint or hire a registrar or office manager to administer the CSSS business office. The registrar or office manager may take part in meetings of the councillors, and will be asked to leave the meeting when there is any potential conflict of interest. The registrar or office manager is not eligible to vote as a member of council. The role and responsibilities of the registrar or office manager will be defined from time to time by council, and based on precedent include:

- On behalf of the treasurer, prepare cheques; manage petty cash, chequing and savings accounts; be a signing authority on the CSSS bank accounts.
- Maintain records of membership, incorporation and related correspondence.
- Prepare and distribute emails, newsletters and award certificates.

7. Duties and Expectations of Councillors

All

- Take part in meetings, teleconferences and email exchanges to the fullest extent possible.
- Represent the CSSS, promote soil science and the CSSS, and encourage membership in the CSSS and subscription to the Canadian Journal of Soil Science.
- Mentor new council members and new CSSS members.
- Take on special projects in support of the objectives of the CSSS as opportunities and needs arise.
- Encourage nominations for CSSS awards.
- Be familiar with Canada's Not-for-profit Corporations Act (<https://laws.justice.gc.ca/eng/acts/c-7.75/>).
- Read the Primer for Directors of Not-for-Profit Corporations: Rights, Duties and Practices (https://www.ic.gc.ca/eic/site/cilp-pdci.nsf/eng/h_cl00688.html).

President

- Serves as chief executive officer of the society.

- Presides at all society and council meetings and has general and active management of society affairs.
- Sees that all orders and resolutions of council are carried into effect.
- Arranges for and conducts the annual CSSS council meeting, and the annual general meeting
- Serves as master of ceremonies for the annual banquet, and presents all awards at the banquet.
- Arranges and conducts council meetings as required throughout the year.
- Appoints members to standing committees.
- Makes recommendations for the CJSS editor in chief.
- Makes recommendations for the local arrangements committee chair for upcoming CSSS meetings and indicates CSSS financial and other support available to that committee.
- Updates CSSS council job descriptions as required.
- Chairs the rules committee.
- Serves as public relations contact for the society and communicates with the membership.
- Writes official letters of congratulations to successful nominees for CSSS fellow, honorary membership and soil science for society awards.
- While in office, maintains files related to the business of the CSSS, including correspondence and project reports, and passes files to the next president as needed.
- Maintains schedule for the CSSS activities and ensure progress.

Secretary

- Records activities of the society and assists council to carry out its objectives according to the by-laws.
- Ensures the scientific community is aware of the annual meeting location and date.
- Conducts general correspondence of the society.
- Collects committee reports prior to the meetings of council, distributes reports to council and records and distributes minutes of meetings of the council.
- Ensures the call for nominations for vacant council positions is issued to members before the end of the calendar year (usually mid-October); see Rule #3.
- Ensures proposed rules and guidelines changes are received from the rules committee prior to April 1.

Treasurer

- Responsible for day-to-day management of the financial affairs of the society, including but not limited to the following (with some activities completed by contractors at the direction of the treasurer):
 - Collects dues from members.
 - Pays for purchases of goods or services on behalf of the society.
 - Makes banking arrangements.
 - Makes financial investment arrangements.
 - Keeps the financial record of the society.
 - Files required reports to Revenue Canada and Consumer and Corporate Affairs Canada.
 - Meets provincial government reporting requirements.
 - Chairs the finance committee.

President-Elect

- Chairs the awards committee with duties as follow:
 - As soon as possible after January 1, appoints two past-presidents to serve on the awards committee and move that the incoming awards committee be approved by council.
 - Prepares a call for award nominations for the CSSS website, the first CSSS newsletter of the calendar year, and for distribution by the business office to members to cover the following CSSS awards: fellow, honorary membership, soil science for society, pedology travel award, student travel, student presentation and student book awards.
 - Contacts CSSS treasurer to determine funds available to cover travel and book awards.

- Chairs an awards committee (president-elect, two CSSS past-presidents, appointed by the president); receives nominations documents and award applications, compiles and provides copies to other committee members; oversees evaluation of nominations and applications.
- Presents awards committee recommendations to CSSS council for approval at least one month before CSSS annual meeting.
- Invites nominators of successful fellow, soil science for society or honorary member nominees to informally notify their candidates (president writes the official letters of congratulations).
- Contacts nominators requesting they convey outcomes of awards committee decisions to unsuccessful fellow, soil science for society or honorary member nominees.
- Notifies Travel Award applicants about the Awards Committee's decision.
- Arranges preparation of the Fellow and Honorary Membership certificates (template with Business Office and Secretary) and selects a suitable frame.
- Prepares a report of the Awards Committee for the CSSS annual meeting.
- Oversees and organizes the student awards (book, Bentley, president's award) at the annual meeting.
 - Contacts universities (soil science, land resource, environmental departments) to select recipients of the CSSS undergraduate student book award. Informs office manager who orders books. Prepares book plates (template with business office and secretary). Informs CSSS treasurer of costs and reimbursement.
 - Checks that registration and/or abstract submission form for the annual meeting includes a request for students to indicate if they intend to compete for the student presentation awards (CF Bentley oral; president's poster).
 - Prior to the annual meeting, selects judges for the Bentley and president's poster award (the total number of judges being left to the discretion of the President-elect). Appoints one of the judges to chair the evaluation process (score cards and evaluation procedure on web page) for each award.
 - Prior to the annual meeting, liaisons with the program chair of the local organizing committee to ensure student presentations for the Bentley award are scheduled to allow each presentation to be judged by at least three judges. All student presentations should be completed early in the afternoon prior to the banquet to ensure adequate time to evaluate scores and select winners.
- Oversees awards banquet of the annual meeting.
 - Prepares and arranges printing of awards booklet for the CSSS awards banquet (template with business office and secretary), to include:
 - short table of contents
 - photograph and short write-up for each of the current year fellow(s), soil science for society award recipient(s) and honorary member(s) (as applicable; write-up usually prepared by first nominator)
 - list of any other current year awards that are determined prior to the conference, including undergraduate book award awardees (names and affiliation) and travel award recipients (names, affiliation, amount of travel award)
 - updated fellows list
 - list of awards committee members
 - list of new CSSS council members
 - Arranges with the annual meeting organizers to provide complimentary banquet tickets in registration packages for new fellows and honorary members (plus guests).
 - Arranges for someone, usually the first nominator, to present citation at the awards banquet for each new fellow, soil science for society award recipient, and honorary member. Suggests citations and replies be limited to approximately 10 minutes for each award.
 - On behalf of CSSS, extends thanks to the annual meeting organizers and volunteers for their work

and efforts at the close of the banquet.

Past-President

- Performs duties and exercises powers of the president if the president is absent or unable to act.
- Member of the rules committee.
- Member of the finance committee.
- Promotes and initiates nominations of members for awards and other forms of recognition from institutions and organizations other than the society (awards from other societies, helping appoint CSSS members to roles on the Global Soil Partnership, the International Technical Panel on Soils, and other relevant UN-FAO positions).

Graduate Student Councillor

- Provides liaison between the society and active or potential graduate student members of the society.
- This position should alternate between candidates from eastern and western Canada.
- Participates in council activities and vote on all motions brought to council.
- Promotes and maintains communications (e-mail network) between the society and Canadian academic units involved in soil science education.
- Provides information on CSSS awards and annual meeting to students.
- Helps coordinate and plan student activities at the annual meetings.
- Provides student news for each publication of the CSSS newsletter.
- Provides input as needed to society publicity material.

Eastern and Western Councillors

- The eastern councillor is responsible for Ontario, Québec, New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland and Labrador and Nunavut; the western councillor is responsible for Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and the Northwest Territories.
- Covers concerns of members within respective region.
- Covers concerns of international members as needed.
- Corresponds as needed to new and interested members within respective region.
- The eastern councillor prepares two to three newsletters (generally, January/February, June/July, September/October) to include society reports and news, information on CSSS awards, and election information and results.
- The western councillor oversees the CSSS website, ensuring information is correct and up-to-date; including working coordinating revisions with a web designer, and updating the CSSS Wikipedia page.
- Both councillors ensure that a team is in place for effective informal communications (notably effective and prudent use of social media to contribute to the CSSS mandates) via the education committee.

Editor In Chief of CJSS

- Whether or not a full voting member of council, the editor in chief of CJSS provides liaison between the society and activities and editorial aspects of the CJSS and promotes and maintains communications between the society and CJSS, the science arm of the society.

8. Committees and Sub-Committees

- Council shall appoint or approve committees deemed necessary for the conduct of society affairs.
- Committees advise the council.
- Standing committees shall normally continue in operation from year to year unless terminated by council; two such standing committees are the awards committee and the rules committee.
- Ad hoc committees and task forces may be established by council and shall have a termination date in their terms of reference; examples include nominations committee, membership task force.
- Council shall prescribe the terms of reference for all committees, that provide a description of the

function and duties and composition and tenure of all committees.

Awards Committee

- Shall be a standing committee and consist of the president-elect, who shall act as chair, and two other members selected from CSSS past-presidents.
- All members shall be approved by council at the beginning of each year.
- Shall annually receive nominations from members of the society for fellows; and recommend to council at least one month before the annual general meeting, name(s) of most suitable candidates for the award of fellow. Nominations must be signed by three members and supported by a short summary indicating qualifications of the nominee. The recommendation of the committee is subject to approval of council which makes the award.
- The chair of the committee shall coordinate judging of student presentation awards, such as the president's and Bentley awards.
- Responsible for making recommendations to council on awards, including recommendations on changes in the nature of the awards and on recipients of awards.

Rules Committee

- Shall be a standing committee of the society and consist of the president who will act as chair and two other members selected from CSSS past-presidents.
- May, by resolution, make, amend or repeal by-laws or rules that regulate activities or affairs of the society. Any such by-law or rule, amendment or repeal shall be effective from the date of approval by council until the next meeting of members where it may be confirmed, rejected or amended by the members by ordinary resolution. If it is confirmed or confirmed as amended by the members it remains effective in the form in which it was confirmed. It ceases to have effect if it is not submitted to the members at the next annual general meeting (AGM) of members or if it is rejected by the members at the meeting.
- Ordinary resolutions require a simple majority (50% plus 1) of votes cast by the members entitled to vote, to be adopted. For example, election of councillors is usually made by ordinary resolution.
- Special resolutions require the approval of two-thirds of the votes cast by the members entitled to vote. For example, fundamental by-law changes such as amalgamation and continuance require special resolutions. Special resolutions are only effective when confirmed by members.
- Resolutions for new by-laws or rules and guidelines or amendments to or repeals of existing by-laws or rules must be received by the secretary in advance of the annual general meeting.
- Within twelve months of the confirmation of by-law changes by members, a copy of the amended by-laws must be sent to Corporations Canada.

Finance Committee

- Shall be a standing committee of the society and shall consist of three members: the treasurer (chair), the current president or a past-president, and a member-at-large.
- The role is to share the workload of the treasurer, and to advise and make recommendations in managing and monitoring the society's short- and long-term finances.

Education Committee

- Shall be a standing committee of the society and shall consist of at least four CSSS members.
- Chair and/or co-chairs will be determined by members of the committee on an annual basis.
- Has four main objectives: compile and disseminate information about the soil science courses and programs at Canadian postsecondary institutions; enhance soil science education at the K-12 levels; establish and maintain contacts with the international soil science community regarding new developments in soil science education; and support informal education through communications and outreach with both specialists and the public, including via social media.

Pedology Committee

- Shall be a standing committee of the society and shall consist of at least four CSSS members.
- Chair and/or co-chairs will be determined by members of the committee on an annual basis.
- Mandates include: improvement of the taxonomic classification system for Canadian soils through system revision supported by new information; maintenance of contact with the international pedology community on new developments in soil genesis and classification; and compilation and dissemination of information about genesis, distribution, classification and wise use of Canadian soils.

9. Accounts and Financials

The Treasurer is the responsible councillor. In routine operation, all financial transactions require the signature of two signing authorities. There are three or more signing authorities registered with the banking institution, and these may include the president-elect, president, past-president, secretary, treasurer and business office manager.

There will be a petty cash account from which the office manager can make direct payments, with their signature alone, for routine minor items such as postage, stationary, printing and office supplies. There will be a chequing account and a savings account, and there may be other simple investments such as GICs as determined from time to time by the council to be in the best interests of CSSS.

Every year, the financial records are to be reviewed by at least two and up to three financial reviewers who are CSSS members but not members of council. The signed financial reviewers' reports must be returned to the treasurer prior to the annual general meeting. The treasurer and office manager will provide any information requested for these audits. The choice of reviewers will be proposed and voted on at the annual general meeting or by electronic ballot.

10. Order of Business

The order of business at all council meetings, the CSSS annual general meeting and any other duly called meeting may be varied for any meeting by a majority vote of those present. Items generally include the following:

- Review, revise and approve agenda.
- Review, revised and approve minutes of the last meeting.
- Business arising out of the minutes.
- Communications.
- Reports of officers and committees.
- Unfinished business.
- Resolutions.
- New business.

11. Awards

The CSSS shall have an awards committee appointed by the president, normally chaired by the president-elect and confirmed by council at the beginning of each calendar year. The committee will encourage nominations from among CSSS regular members. Approval of these awards shall be a unanimous decision by committee members. The committee decisions and report to council shall be final. The committee oversees the following CSSS awards.

CSSS Fellow

- Nominees must be members in good standing at the time of their nomination and must have been a CSSS member of at least a total of ten (not necessarily continuous) years.

- Nominees must have a distinguished record of service in any field of soil science.
- Each nominee must have one nominator and three supporting sponsors.
- Members of CSSS council or the awards committee cannot serve as a nominator or sponsor.
- Members of the CSSS council are ineligible for nomination as a CSSS Fellow while serving their term on council.
- The award is generally held at the awards banquet at the CSSS annual general meeting, and the recipient will be given a suitably inscribed plaque or certificate.
- Up to two CSSS members can receive an award in any calendar year.
- CSSS will endeavor to publicize fellow award recipients.
- Unsuccessful nominees may be re-nominated in a following year with new supporting documentation; a new nominator or new sponsors may be used.
- No candidate will be eligible for both a fellow and a soil science for society award in the same year.

Honourary Membership Award

- Honours non- members who have rendered valuable or special service to soil science in Canada.

Soil Science for Society Award

- Awarded to a member or non-member who has made a contribution towards promoting soil science to the general public.
- Shall be made at the CSSS annual general meeting and the recipient will be given a suitably inscribed plaque or certificate.
- CSSS will endeavor to publicize this award.
- No candidate will be eligible for both a fellow and a soil science for society award in the same year.
- The CSSS, at the recommendation of the awards committee, may award more or less than one of these Awards in a given year.

Pedology Travel Award

- To a member in good standing to attend a pedology related national or international conference or workshop.
- The award shall cover expenses related to attendance at the meeting (registration, air and/or ground transportation, accommodations, meals).
- With approval of council, the awards committee shall determine and assign maximum award value.

Student Travel Award

- To support students to travel to the annual conference.
- Students must be CSSS members and enrolled in a Canadian post-secondary institution to apply.
- Preference will be given to students who will be giving either an oral or a poster presentation over students who are just planning to attend the conference.
- The research summary provided by the student must be reasonable (rationale, hypothesis, objective) and clearly written.
- Preference will be given to students who have not previously received a travel award.
- The student must have had the application form signed by their supervisor or department chair.
- With the approval of council, the awards committee shall assign the number and value of the awards.
- The awards committee may make this for international soil science meetings (typically two per year, as approved by council) and will communicate procedures and terms on the CSSS website and newsletter.

Student Presentation Award

- CF Bentley awards are for oral presentations and president's poster awards for poster presentations.
- Students must be CSSS members at time of their presentations.
- Students must indicate that they will be competing for presentation awards at CSSS annual meetings (either at abstract submission or at registration (question included on registration form)).

- As of 2020, the Bentley award winner receives \$500, the first runner-up \$300, and the second runner-up \$200; the president's poster award winner receives \$500, the first runner-up \$300 and the second runner-up \$200. Small modifications may be made at the discretion of the awards committee (awarding a tie for runner-up, which would result in a \$100 increase in expenditure).

Student Book Award

- To recognize undergraduates at Canadian universities who demonstrate excellence in soil science.
- Award winners receive a copy of Soil Sampling and Methods of Analysis (2nd Edition), published jointly by CSSS and CRC Press in 2007.
- Candidates are nominated by their academic department.

12. Annual General Meeting (AGM)

There will be an annual general meeting as specified in the by-laws. The by-laws provide that a quorum at any meeting of members shall be ten percent of the members entitled to vote. The exact quorum should be determined prior to each meeting. Normally the annual general meeting is held in conjunction with the annual CSSS technical conference.

- Where possible, reports from council and committees, such as the president's report, treasurers report (profit/loss, financial reviewers' review, budget for coming year) and nominations, will be presented, and electronic or paper copies will be circulated to all members prior to the meeting.
- Elections may take place at the meeting, but in general electronic voting is preferred.
- Awards may be presented or they may be presented at some other event of the CSSS annual meeting, or they may be delivered in some other way to the recipients.
- Council is responsible for setting the agenda, although members have a right to add items to the agenda by submitting a notice (proposal) to council 90 to 150 days before the anniversary of the previous annual meeting of members. Any member entitled to vote at an annual meeting of members may submit a proposal to council about any matter that the member wishes to raise at the meeting. This includes the right of a voting member to submit a proposal to make, amend or repeal by-laws.

13. Technical Meetings and Workshops

The CSSS will endeavor to hold an annual technical conference, with location decided by the council. Often these meetings are held jointly with meetings of another scientific society, and the details of this association are negotiated for each case. Typically, a local organizing committee is established, with one person identified to report to the CSSS council, and will usually have representatives of all the societies involved.

Planning for these conferences must begin more than one year prior to the conference. Usually, CSSS seeks partner societies to extend the technical interest in the conference and to share risk, and this in particular needs early planning.

In all conferences and technical meetings, CSSS will endeavor to create opportunities for certified crop advisors to take part and to earn points. This requires that the local organizing committee apply for recognition from the certified crop advisors organization.

Decisions must be made and documented (memorandum of understanding, signed by the CSSS president and presidents of partner societies) about sharing of financial risk, especially for joint meetings. Often, the CSSS will advance money to the local organizing committee, who maintain separate accounts. The CSSS may sign contracts related to the conference, or this may be done solely by the local organizing committee or the partner societies. Typically the conference has a small surplus, and a decision about the disposition of this must be made prior to the conference. A typical model for this is that monies advanced

from the partner societies is paid out first, then the remainder is split among the societies based on the relative numbers of members from each who attended the conference. The exception to this is when one partner society was more successful than the other in raising sponsorship funds, in which case a prior decision is made on how this will affect the final disbursement. The local organizing committee will be responsible to present a budget and a final accounting of the conference to the council.

The council may decide to support other technical meetings or workshops in any year. Such support may be in name, administrative and/or financial as decided by the council.

14. Newsletters and Web Page

CSSS will prepare newsletters, maintain a web site, and may undertake social media communications, soon to be guided by the societies communication plan (drafted in 2020 for consideration at the 2020 annual general meeting).

Solicitation and review of articles for the newsletter is the responsibility of the eastern councillor. Content is flexible but would typically include a president's message, reports on past or upcoming CSSS annual meetings and special topic articles from council members or regular members. In appropriate issues the newsletter may include nominations and biographies and financial reports. There will be two to three newsletters prepared each year. These may be fully electronic or printed copy, at the decision of the council from time to time, and will be assembled and prepared by CSSS business office personnel.

Review and provision of materials for the CSSS web page is the responsibility of the western councillor. Both eastern and western councillors ensure that a team is in place for effective and prudent social media and other informal communications in collaboration with the education committee, as guided by the communications plan.

15. Fees

The Council may change the membership categories and fee schedule from time to time. The present categories and fee schedules are as follows.

- Regular members \$115 (effective Jan. 1 2022).
- Fellow members \$90.
- Student members, of soil science at a Canadian or equivalent university or college \$10.
- Post-doctoral fellow members, who hold a formal post-doctoral fellowship at a Canadian university or Canadian federal government department or are Canadian fellows working abroad \$45.
- Retired members, who were regular members and have retired from their formal employment \$30.
- Fellow emeritus members, who are CSSS fellows and retired from their formal employment \$0.

16. Affiliations

The Society is affiliated with the International Union of Soil Science and the Global Soil Partnership of the Food and Agriculture Organization of the United Nations. The terms and conditions of these affiliations will be reviewed on an annual basis. The society may discontinue these affiliations or become affiliated with any other organization providing such a decision is approved by Council.

The Canadian Journal of Soil Science is the official journal of CSSS. CJSS is owned by Canadian Science Publishing. The editor in chief of CJSS is appointed as outlined in Rule #4 and must be a CSSS member. Associate editors are approved by the editor in chief of CJSS and may or may not be members of CSSS.

17. Insurance

CSSS Council should obtain director's and officers liability insurance. Such an insurance policy typically

protects against exposure to personal risk from claims arising out of council decisions or omissions, or out of actions or activities performed directly under the auspices of council. The insurance policy should extend to all past and present council members, officers and committee members of the society.

18. Changes to Rules

These rules may be added to, amended or repealed as outlined in Rule #8 under the rules committee or Rule #12.



THE UNIVERSITY OF BRITISH COLUMBIA

**2024 CANADIAN SOCIETY OF SOIL
SCIENCE ANNUAL MEETING
UBC, VANCOUVER
JUNE 2024**