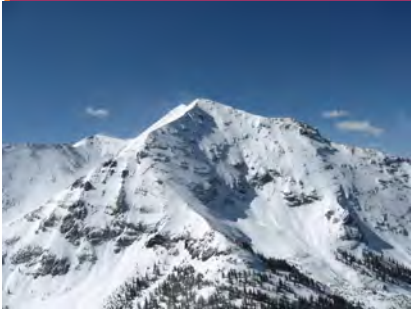


The Sharpshooter

Oregon Society of Soil Scientists

MAY 2018—QUARTERLY NEWSLETTER



***Summer Tour details inside!
The Wallowas! On the Lake!
Save the dates!
Sept. 10th 11th & 12th***



President's Message

Hey fellow Soils Enthusiast! I find myself here once again as your president – for the 3rd time! How fun! I sure have found a home of brilliant, fun, funny, soily folks in the OSSS. Happy to belong to an organization that would even have me as a member. Its going to be a great year and I am thrilled to announce a great summer tour and fast developing plans for the winter meeting already!

First I must thank my predecessor Shannon Andrews and a terrific board of directors for an amazing year of leadership and great events and one of the best winter meetings ever! I can't top that – congratulations Shannon! And at that meeting, I experienced one of the greatest moments of my life when they swore me in for my 3rd go-around as Prez with a round of Society Brown Russians (our official cocktail that I created for my 2nd presidency—published elsewhere in these pages...) for all (still wondering who paid for all those...) and a heartfelt toast from my hero Scott Burns – tears, true tears – my hero, toasting me! If you missed it, the meeting was filled to the brim with terrific talks and a great field trip (Shannon writes-up elsewhere in these pages). I even passed around my hat and raised over \$500 cash for the Soil Judger's trip back east – another magical tradition now so look out, if my hat is out, you're giving!!!

Just thinking back when I attended my first meeting in Astoria at Ed Horn's meeting in 2006 (I slept on the street in my van!) much has changed, though the congeniality of the group that welcomed me is still a part of the OSSS. What have become expectations of our society were all just dreams once – public talks, students at our meetings, student poster sessions, speed mentoring (!), public soil art, true non-profit status,



solid bookkeeping, websites and social media, surplus money in the bank(!), even all the Sharpshooters from the whole history of the OSSS are just a click away now – all these things we dreamed and took years of experimentation and development and are now just part of the mix of what society members expect. Of course it all started long before me...which has me thinking not only about my own history with the OSSS but, history in general - of the OSSS, of soil science societies, of soil science, the history of soil itself!!! And that's what I'm thinking about for my winter meeting next year.... BIG HISTORY!

President's Message Continued...

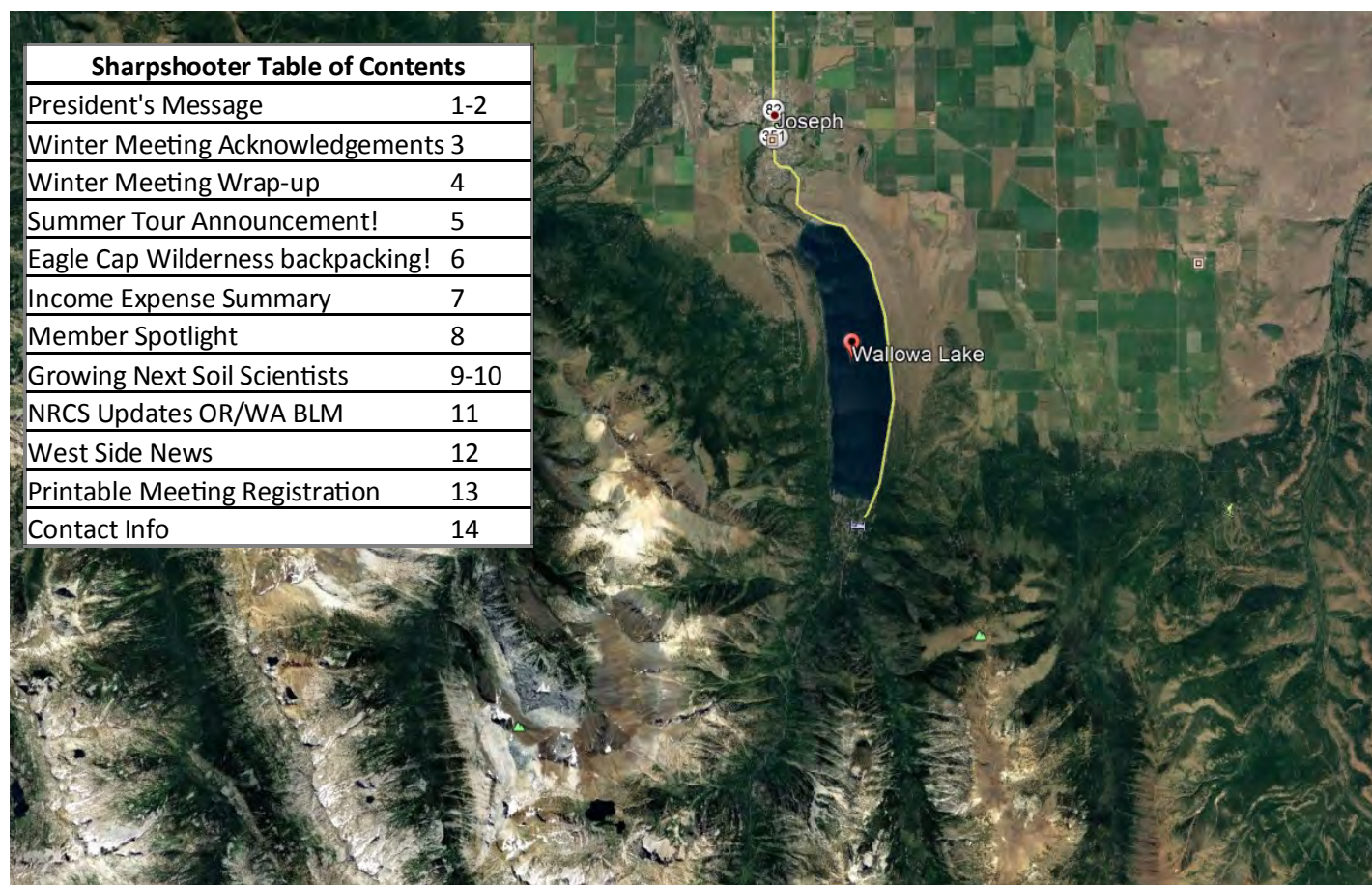
Big History: a natural history of soil! On the Coast at the Historic Anchor Inn in Lincoln City on February 28-March 2! It's going to be historic so please get it on your calendar! Already have terrific speakers lined up but looking for more speakers who could help tell these stories...know anyone? Who knows the history of the Soil Societies in the US? The history of Soil Science? The history of SOIL!!!? Let me know!

But before that...there's a **summer tour** to get on your calendar! Save the dates now! September 10th, 11th, and 12th in the Wallowas at a great lodge on the lake! One of the reasons I was excited by the idea is that I've never been there! And as 3rd time around president, I am delegating more and wanting to experience new things rather than share things I know about (I've done that twice now!). Thank goodness there are members who leapt to the fore to help put it all together! Bruce Moffatt threw himself at it and came up with a terrific tour for us that you are going to love! (more on that elsewhere in these pages) Thanks Bruce (future president...?) And also thanks Allen Makinson for ideas on the subject – in fact Nina and I got a room at the Geiser Grand in Baker City on the night of the 12th and are adding a day or two onto the trip to see some cool stuff Allen has in store, so book your room now and join us! There's even an additional Eagle Cap Wilderness backpacking trip being offered by the incoming prez! (see page 6)

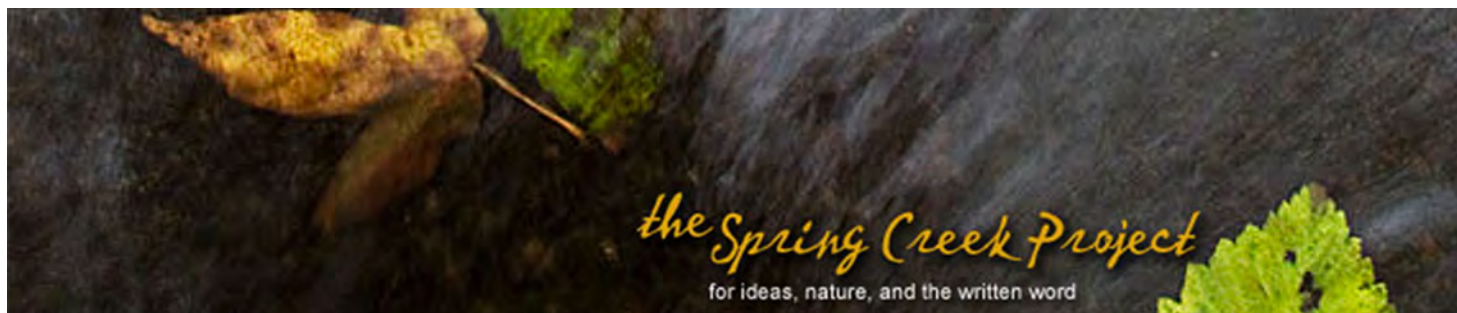
So get that stuff on your calendar and let's get together and see some SOIL!!! ...and have a couple Society Brown Russians too!

SOIL!!!

James Cassidy—OSSS President...again!



OSSS would like to give a heartfelt thank you to the Sponsors of the
Public Talk by David Montgomery at the
2018 Winter Meeting: Growing your Soil Health Toolbox



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2018 Winter Meeting Wrap-Up: Growing Your Soil Health Toolbox—Shannon Andrews

Wow, what a joy to spend a couple of days discussing, thinking about, and challenging each other about soil health.

We hit the ground running with a business meeting to elect our new board and welcomed in James Cassidy for a third term as President with a commemorative toast with Brown Russians 7.49 YR 4.9/3.1. Sean Rochette has stepped up to be our new Vice President and Alicia Leytem has rejoined the board as our new Secretary. Welcome!

Through generous donations of local businesses and our members we had the opportunity to host a public talk by Dr. David Montgomery and we packed the meeting hall with over 200 people. We worked to fulfill our part of the OSSS mission, to spread the word about the importance of soil science. Members from the community, producers, and OSSS members came to hear about *Growing a Revolution* and left with messages regarding the *Erosion of Civilization* and the *Hidden Half of Nature*, links between the health of our soils and the health of our human population.

Thursday we heard from experts on topics ranging from disease suppression to effective communication to appropriate categorization for soil health assessments. Appetizers and drinks made for a lively poster session where students and professionals shared their latest research and projects. We would like to congratulate Stephany Chacon who took home the First place prize, and Dr. Vance Almquist who took home Second place.



NRCS, SWCD, and Extension Stations around the country!

Thank you all for your support and here's to another great year!

Soil Science Society Brown Russian:

Rocks glass, fill with ice cubes (or frozen river rocks)

1oz kahlua (1.15 g/ml)

Add evaporated milk (1.08 g/ml)

- Try to get to 7.49YR 5/5.1, with an E horizon on top

Top with 1oz cold espresso (1.0 g/ml)

Serve horizonated to resemble a Spodosol

Garnish with Douglas-fir sprig



CHEERS!

Friday we had a hearty discussion of soil health testing metrics and were treated to four soil pits at Cala Farms and discussion with Don Wirth. For me, the highlight of the field tour took place after lunch. Nick Sirovatka shared the power of visual demonstration with the NRCS soil health demonstration trailer. The looks of awe and impressed understanding on the faces of so many soil scientists portends the impact that such demonstrations have with producers. Imagine how many producers we could encourage to take on more soil health principles if we had these demonstration units in every



OREGON SOCIETY OF

Soil Scientists

Summer Tour!

Wallowas on the Lake

...at the Lodge!

2:00pm Sept. 10th – 1:00pm Sept. 12th, 2018

The Oregon Society of Soil Scientists Summer Tour will be based around Wallowa Lake, September 10-12. Join us in NE Oregon. Three days of collegial soil discussions and discovery. Transportation is available for those that do not want to drive, and the lodging at the Wallowa Lake Camp includes meals (accommodating dietary needs) and comfortable bunkhouse rooms. Meal packages are possible if you want to stay

in Joseph just a few miles away. The Tour will visit the Zumwalt Prairie, where there are a variety of prairie soils that we will explore in depth (pun intended). Hike on glacial moraines, interpret soil development, view spawning salmon, discuss the terror of barley and brewing (Terminal Gravity Brewery visit!), and enjoy the spectacular scenery of the region. The Tour is preceded by the Hells Canyon Mule Days and followed by the Wallowa Arts Festival, so you can make this a multi event road trip if you choose. There will be good food, great events and a relaxing venue. Hope to see

For registration, membership, and the full agenda, visit our website

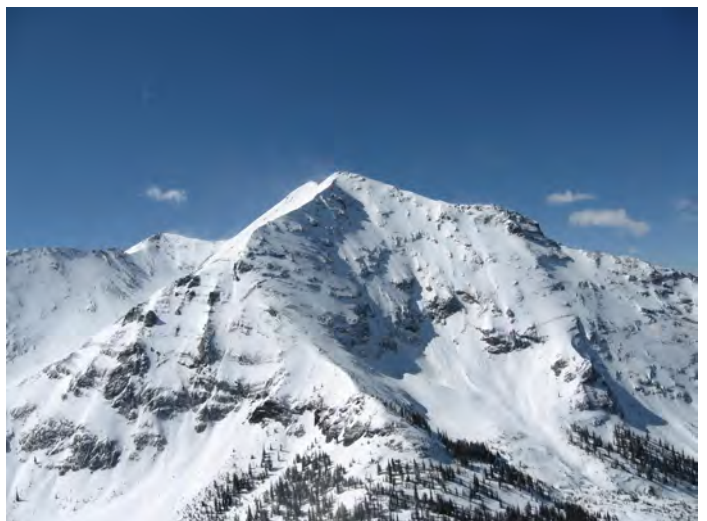
www.oregonsoils.org

Registration Details

\$100 for Members, \$75 for Students,

Registration includes:

- 2 nights lodging in bunkhouse rooms!
- All meals (prepared for us!)
- Transportation for those who wish to use it.
- Stay tuned for additional days of lodging



Eagle Cap Wilderness Backpacking Tour—Unofficial OSSS fun!

Immediately after the Summer Tour!!!

September 13th, 14th, and 15th—Make a week of it!!!

If you've traveled most of the way across the State of Oregon to get to Wallowa Lake like most of us, then you may be interested in sticking around after the tour for an unofficial adventure into Oregon's largest wilderness area, the Eagle Cap Wilderness.

Your current Vice President, Sean Rochette will be organizing a **30 mile loop** backpacking trip to spend 3 nights exploring the Eagle Cap Wilderness Lakes Basin area. This trail will start near the South end of Wallowa Lake by going up the West Fork Wallowa River for about 6 miles before climbing up into an area covered by alpine lakes with an optional 4 mile side trip to summit Eagle Cap at 9,572 feet of elevation. The trip will begin the day after the OSSS Summer Tour ends.

If you are ready for some real back-country, mind-blowing fun adventure or want more information then email Sean at sean.rochette@gmail.com. You can also get more information here: <https://www.mountaineers.org/activities/routes-places/eagle-cap-lakes-basin-loop-oregon>

DO IT!!!



By the numbers... we are in GREAT shape thanks to Shannon's leadership and Pam's care of the books. Really, I don't remember ever having this much of a surplus coming into office. I promise not to squander it...all. James Cassidy

FY 17 (July 1, 2017 to June 30, 2018) Summary of Income and Expenses as of 4/24/18

Income:

Dues (44 regular, 8 student, 24 lifetime members not included)	\$ 2,540.00
Summer Tour Registration (20 regular, 14 student)	\$ 1,760.00
Winter Meeting Registration (38 regular, 30 student, 30 nonmember)	\$12,545.00
Winter Meeting Donations	\$ 2,390.00
Taxes refund (for 2011 Federal and 4 years of Oregon, plus interest)	\$ 1,102.29
Sharpshooter Ad	\$ 50.00
Tshirt Sales	\$ 165.00

Total Income \$20,552.29

Expenses:

Online Transaction Fees (for payment of dues, donations and registrations)	\$ 525.08
Summer Tour Meeting Room	\$ 75.00
Summer Tour Campsites	\$ 192.00
Summer Tour Food	\$ 862.45
Winter Meeting Food	\$ 7,046.40
Winter Meeting Keynote Speaker Fee	\$ 3,000.00
Winter Meeting Speaker Transportation and Lodging	\$ 804.93
Winter Meeting Buses (Summer Tour Vans donated by Ace Cheney Fund)	\$ 950.50
Winter Meeting Poster Awards	\$ 300.00
Winter Meeting Registration Materials (flash drives, name tags, programs)	\$ 808.58
New Member Materials (magnets, business cards)	\$ 251.06
Tshirt Expense	\$ 738.55
PO Box Rent and Stamps	\$ 92.00
Annual Board Strategic Retreat Lodging	\$ 591.76
Liability Insurance, Annual Premium	\$ 265.00
Annual State Fees (Corporation Registration Renewal, Dept. of Justice Report)	\$ 70.00
IRS Fee for 501c3 Application	\$ 275.00
Website Maintenance (Domain, Woo Software, Plug-ins)	\$ 337.34
Refund of Extra Payments	\$ 197.52

Total Expenses \$17,383.17

FY17 Income – Expenses = \$3,169.12

Umpqua Bank Balance: \$7,904.24

Notes:

OSSS has only one bank account and a single, simple ledger to track income and expenses.

Some income and expenses in FY17 will not recur. These are \$275 fee for 501c3 application and \$1,102.29 refunds of federal and state taxes that should not have been paid.

Our online transaction processor is Stripe which charges \$0.30 plus 3% for each transaction.

The only additional expense expected for FY17 is food for the Board Retreat (around \$200).

OSSS Member Spotlight: Garrett Duyck

Hi, I'm Garrett Duyck. I'm from Newberg, Oregon and studied Crop Science at Oregon State University. I work for NRCS in Oregon focusing on soil health projects including cover cropping. I'm a board member for Oregon Envirothon and have helped setup the Soils Competition for high school students for many years. It's important to me to be a member of OSSS because it's an excellent organization to learn about soils, stay up to date with emerging science, and network with some of the state's best soil scientists. I look forward to expanding my skills and experiences with Oregon's fascinating soil.



Growing the Next Generation of Soil Scientists - Planting Early Seeds

~Sarah Hash | OSSS Eastside Director, sarahjanehash@gmail.com

“How did you first become interested in soils?” It’s a question I’m often asked by incredulous acquaintances when they first become aware of my occupation. For me, it happened when a kind college professor guided me toward some exploratory classes during a junior-year existential crisis. After my first intro soils course at Virginia Tech, I knew I wanted to be a soil scientist. For most colleagues I’ve asked, their discovery of soils as a field of study arose similarly by accident—most either found it through college classes or through some other work-related connection as an adult and pursued soil science as a second career. I’ve not yet met anyone who left high school with a plan to pursue a career in soils. What if, when you asked a fellow soil scientist (or soil lover) that same question, they replied “A soil scientist visited my middle school classroom, and that really opened my eyes to the vast and complex world of soil.”? That would be a wonderful day.

As an employee of the U.S. Forest Service, environmental education and outreach is part of my job description. Our agency embraces the importance of engaging youth and the general public through conservation education programs to help them understand the values and functions of ecosystems we manage for the American people. I strive to further show how soils are the foundations of those ecosystems, how soils tell the stories



of our landscapes, and how soils sustain life in our forests and in our communities. Finding ways to get kids excited about soil can be challenging, given the lack of pre-developed curricula and teaching tools. This has led me to “roll my own” and develop my own lesson plans and activities from scratch—a time-consuming process, especially when trying to tailor the story to local soils, landscape development, and concerns around human use and management. Here are a few of the “tricks” I’ve learned for delivering experiential soils learning sessions:

1. Do some basic research on what the standards of learning are for a target grade level. I created a really simple, but fun and effective, activity for first-graders around skills of observation (one of their core skills in the first grade SOLs)—we gave each group a different interesting rock and asked them to record everything that they



could observe about it, and followed up by explaining what their observations told us about the composition and formation of each rock (we included a large chunk of pumice that floated). They loved it.

2. Work with what you’ve got. Can’t go on a field trip, but can get out into the school yard? Look at the differences between natural soils on the schoolyard fringe and altered soils in constructed environments. Any nearby greenspace will offer some sort of opportunity.



OREGON SOCIETY OF
Soil Scientists

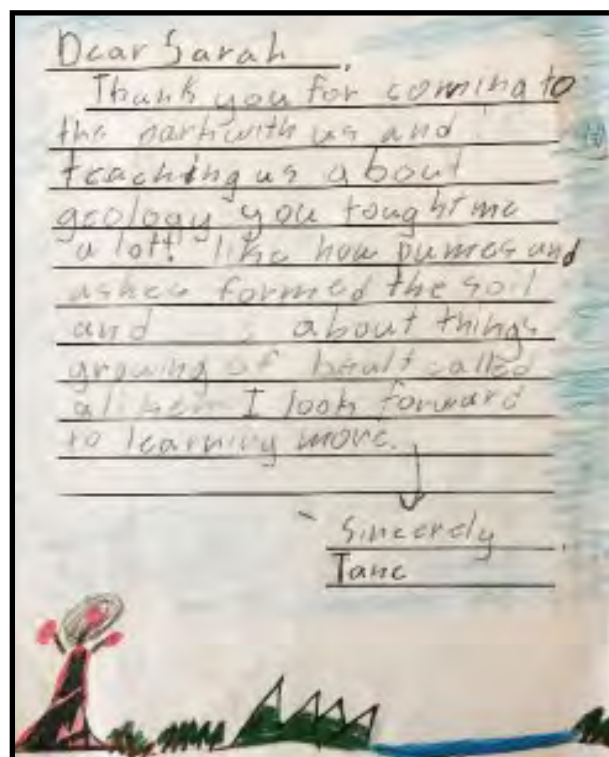
Growing the Next Generation of Soil Scientists (Continued)

3. Find a hook. All of us know the statistic about a teaspoon of soil containing more organisms than there are humans on the planet. Show some scanning electron micrographs of scary-looking soil microbiota (always a hit). That's a great lead-in to looking at soil mesofauna under a dissecting scope (an activity that can be done in the classroom; just dig in your compost pile for plenty of specimens!), or looking for fungal hyphal networks in the ponderosa forest.

4. Use the soil to tell a story—and make it as simple or as intricate as you need for the given audience. I love to explain to kids how soil is the “history book” of the landscape, and how we have to learn the language of the soil to look at the horizons and translate the story. I've developed a series of “mini-monoliths” that illustrate the varied glacial and volcanic history of central Oregon. Seeing the markers in the profile that capture that story can be a very compelling experience for middle and high school aged kids.

5. Make it hands-on. Kids love playing with dirt and rocks (who knew)? If you can get them outside and looking at actual soil in-situ, awesome! If not, take the dirt to them. I collect samples all the time when I'm out working in the woods that are representative of some soil characteristic I may want to illustrate (silt loam texture...subangular blocky structure...diatomaceous earth...a unique surficial volcanic deposit). These materials give students a tactile experience when we can't visit a pit in the woods, and help facilitate meaningful instruction for students with physical disabilities. Sometimes your original plan will be completely subsumed by the simple joy of getting to interact with the soil.

6. With that in mind, but willing to roll with it if things go off the rails. Sometimes kids gravitate to unexpected topics. While teaching a group of fourth graders about local soils and geology at the neighborhood park, the kids fixated on an off-hand comment I made about lichens and their role as pioneer species. Their intense interest inspired a longer (unplanned) conversation about ecological succession, lichen growth rates, and how soil is formed from raw parent material. The thank-you letters I received several weeks later ALL mentioned the lichens.



I'm beginning to amass a collection of activities and lessons for teaching soils concepts to different age groups. I'd love to grow a repository of lesson plans that OSSS members have developed or used over the years, and eventually house them on our website for everyone to use. **To that end, I'm asking for input from all of you. Please contact me at sarahjanehash@gmail.com if you have soils curriculum, lesson plans, or teaching ideas to share.** These can be field- or indoor-based, and simple or detailed—descriptions of how you've illustrated an important concept, or more prescriptive exercises. Please include sources/credits, if applicable. I look forward to sharing the fruits of this effort with you, and collaborating on ways to get more kids excited about soils. Getting a kid's hands in the soil and opening their minds to the intricacies of the below-ground world may precipitate a simple joyful moment, a greater sense of personal responsibility, or a life-long active pursuit of outdoor experiences and work. We're all responsible for growing our future soil scientists, naturalists, and stewards. Let's build our toolkit for this important work!

Sarah



OREGON SOCIETY OF

Soil Scientists

NRCS Updates OR/WA BLM at the Annual Aquatic, Soil, Water, and Air Meeting

Submitted by Marissa Theve, BLM soil scientist and Cory Owens, NRCS state soil scientist

On April 23 through April 26th, the Oregon and Washington Bureau of Land Management held their annual Aquatics, Soil, Water, and Air Meeting in Mount Hood Village, OR. BLM aquatics state lead Scott Lightcap and soil, water and air, state lead Mike Brown steered approximately 50 scientists from both states through two and a half days of presentations and a field day. Presentation and discussion topics ranged from the Soil Biodiversity Project by Elizabeth Bach to databases to partnerships and contracting tools. The field trip showcased a dam removal and large woody debris placement project on the Sandy River, which was a partnership between the BLM Cascades Field Office and a variety of partners. Because the BLM soil program relies so heavily on Soil Survey data, a highlight was Cory Owens' presentation on the status of soil survey across Oregon and Washington as relates to BLM lands. She highlighted the great progress in the S. Malheur Soil Survey and other BLM in-holdings scattered in various initial survey projects. She also discussed SOILS 2026 and the Provisional Ecological Site initiative.

As members of the National Cooperative Soil Survey, the Oregon and Washington BLM greatly appreciates, relies on, and supports both the state-level and Soil Survey services that NRCS provides.



The BLM Field Tour Attendees at the Sandy River



OREGON SOCIETY OF

Soil Scientists

2018 Envirothon Success

Marissa Theve | OSSS Westside Director

On May 4th 2018, over 100 high schoolers from across the state of Oregon gathered to share their enthusiasm for the environment at the Oregon Envirothon. Over 30 teams completed hands-on examinations in the subjects of soils, aquatic ecology, forestry, wildlife and this year's environmental issue: rangeland management. Teams submitted oral presentations, which judges reviewed prior to the test, and the top two teams presented rangeland management plans to the entire group. The soils test stumped students the most out of all categories, with a high score of 41.5 out of 50 possible points. While Sutherland High School's No. 1 team came in first this year, all participating students are environmental champions. Special thanks to OSSS members Jason Martin, Bruce Moffatt, and Garrett Duyck for assisting the soils station and helping to inspire the next generation of pedologists!



For more information about how you can support these efforts in the future, check out: <http://www.oregonenvirothon.org/> or the Oregon Envirothon Facebook page .



Team Oregon Envirothon Soils (Left to Right): Grant Pease, Jason Martin, Bruce Moffatt, Garrett Duyck, Melissa Duyck, and Marissa Theve.



OREGON SOCIETY OF

Soil Scientists

Join us at the OSSS Summer Tour

Wallowa Lake Camp

September 10th-12th, 2018

Please print and mail this form along with a check for
registration and membership

Name

Address

City

State

Zip

Phone

Dietary Restrictions

Registration and Full Agenda will be on the
website soon:

www.oregonsoils.org

Make Checks Payable to

Oregon Society of Soil Scientists

PO Box 391

Corvallis, OR 97339

Registration Details

\$100 for Members, \$75 for Students,

Registration includes:

- 2 nights lodging in bunkhouse rooms!
- All meals (prepared for us!)
- Transportation for those who wish to use it.
- Stay tuned for possible lodging organization on Sunday night

SHARPSHOOTER

The Sharpshooter is the official quarterly newsletter distributed to the members of the Oregon Society of Soil Scientists. Send address changes or inquiries about membership to:

pres.oss@gmail.com or

OSSS | P.O. Box 391 | Corvallis, OR 97339

Advertisements:

Reach more than four hundred soil science professionals with an advertisement in the Sharpshooter.

Whole page—\$50, 1/2 page—\$25, 1/4/ page—\$15, or 1/6 page—\$10.

Provide a jpg file copy to osss.pres@gmail.com by the deadline (first of the month—February, May, August and December).



OREGON SOCIETY OF

Soil Scientists

Membership Rates:

\$50.00 Regular Member

\$30.00 Student Member

\$500.00 Lifetime Member

OSSS Webpage: www.oregonsoils.org

Please feel free to submit an article. We welcome input from soil

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