OREGON SOCIETY OF
Soil Scientists

The Sharpshooter

July 2017 VOL. XXXV, NO. 4

A QUARTERLY NEWSLETTER BY THE OREGON SOCIETY OF SOIL SCIENTISTS

PRESIDENT'S MESSAGE

Hey Soil Enthusiasts!

We have had a busy three months since your last update. The Summer Meeting is planned and registration is OPEN! The **website is now functional** and ready to help you become a member, register for the upcoming summer meeting, and get updates on what is going on with the board and other members.

I want to give a giant thank you to Adam Lindsley who put in many hours to recreate our website, adding new functionality, and speed that will enable us to connect with each other, share information, and spread our love of soil science. More fancy functions are in the works, but now, it gets the job done. http://oregonsoils.org

In the middle of June the board invited some Past Presidents to help us strategize for the upcoming year. We spent a beautiful day in a small classroom at OSU and re-hashed what it is to be a society, the importance of continuation of the society, the goals of OSSS, mechanisms for achieving these goals, and what it will take to get there. I was so thankful to have folks with wisdom, experience, youthful exuberance, and persistence to help our board put together a plan for a great year and hopefully a foundation for years to come.

We will continue our mission of connecting soil scientists with others in various aspects of soil science including aspiring student soil scientists. In addition to this main focus, we also want to spread our knowledge, love, and passion of soils to the public. We know how important soil is, but we want to get that message out. With that in mind, we will be holding public talks at each one of our meetings this year. Please print and post the meeting posters on page 2 and 14 and help us spread the word.

There was an outpouring of information from OSSS members. I have more articles than I have room for! Please enjoy a wealth of information in this edition of the Sharpshooter.

Keep Digging Deeper ~Shannon

Past Presidents Society—Check out James' article with inspiration from the gathering of 8 OSSS Past Presidents at the Warkentin lecture series.

Table of Contents

Join Us on the OSSS Summer Tour 2017

In the Presence of Human History

August 25th and 26th 2017

Harney Co, OR

Public Talk by Scott Thomas with wine and cheese fundraiser

Aug 24th 7:00pm Burns Chamber of Commerce

The Oregon Society of Soil Scientists meets twice a year. Our more informal Summer Tour is typically an intimate gathering of soil scientists and aspiring soil scientists with the goals of; fostering professionalism, stimulating scientific research, cooperation, and fellowship, and advancing the knowledge of soil science.

This year we have the unique opportunity to experience soil as the keeper of history. Scott Thomas, the Burns BLM district archaeologist, has found several sites in Harney Co with significant archaeological evidence of one of the earliest human habitation sites in North America. Please come and share in this discovery!

Cienega deposits

Tour Highlights

Rimrock Draw Rock Shelter - Friday

- One of the oldest known sites of human habitation in N. America
- Giant pit! 100 ft long, 13 ft deep
- Pit crossing an ancient streambed
- See Pleistocene warming and drying
- Cooking hearths date as far back as 10,000 ya
- Volcanic tephra from St. Helens 15,800 ya
- Biogeochemical analyses through time

Skull Creek Dunes – Sat

- Dunes accumulating since late Pleistocene
- Ancient lake bed
- 7000 years of exposed sediment deposits
- Soil development exposed in dune face
- Archaeological artifacts can still be found

Extra pits

- Check out the soils primer of the area
- Will dig additional pits in afternoons

For details and registration

Visit our website

http://oregonsoils.org

Or contact the OSSS president

OSSS.pres@gmail.com

What you need to know about the summer tour

Transportation logistics

Two or three vans for group transportation will be provided. We can coordinate group transportation for people who can meet in Corvallis or Bend. I expect two vans will leave on Thursday and one early Friday morning and that one van will return Saturday night and the others on Sunday. All those who opt to "contact me regarding group transportation/carpooling" on the registration from, will get a google form to help us coordinate.

This donation is in honor of Horace B. (Ace) Cheney, who was head of the OSU Crop and Soil Science Department from 1952 to 1977. These funds are provided by the Cheney Fund for Soil Science Education, an endowment for the Soil Science Department maintained by the OSU foundation.

Lodging

Lodging on Thursday night is on your own. There are several hotels near Burns. I have a room block reserved at The Day's Inn, which is about 1/2 mile away from the Chamber of Commerce and has reasonable rates. Please ask for the OSSS group block.

Pam has offered to stake out camping space for us at the BLM Page Springs Campground in Frenchglen for Friday and Saturday nights. OSSS will pay for the group tent camping rate. RV hookups are available. There is also the Historic Frenchglen Hotel nearby if that better suits your needs.

Food

Wine and cheese fundraiser on Thursday night. Breakfast in town on Friday is on your own (free breakfast at Day's Inn), and provided for those camping on Saturday morning. Sandwich makings and sides provided for lunch on both Friday and Saturday. Group, camp-style dinner provided both Friday and Saturday nights. Snacks and hydrating and caffeinated beverages provided.

Please bring your own food containers to cut down on waste.

Map

See Harney Co. soil map on page 6 for relative area of each site.

12 CEU Credit Hours

Agenda

	Thursday—Burns
6:00 pm	Check in, mingle, wine and cheese fundraiser
7:00 pm	Scott Thomas - Rimrock Draw Rockshelter: Sedi-
	Friday—Rimrock Draw Rockshelter
8:00 am	Load Up and Caravan Out
9:00 am	Opening Remarks by Scott Thomas
9:30 am	Exploring archaeological soil pit
11:00 am	Discussion led by JD Lancaster
12:00 pm	Lunch
1:15 pm	Exploring archaeological soil pit
2:00 pm	Load Up and Caravan Out
3:00 pm	Basin and range geology and water relations
5:00 pm	Load Up and Caravan Out
6:00 pm	Set up camp at Page Springs
7:00 pm	Dinner served
	Saturday—Skull Creek Dunes
7:00 am	Breakfast
8:30 am	Load Up and Caravan Out
9:00 am	Opening Remarks by Scott Thomas
9:30 am	Exploring Skull Creek Dunes
11:00 am	Discussion led by JD Lancaster
12:00 pm	Lunch
1:15 pm	Exploring Skull Creek Dunes
3:00 pm	Load Up and Caravan Out
3:30 pm	Basin and range soil development
5:30 pm	Load Up and Caravan Out
6:00 pm	Set up camp at Page Springs
7:00 pm	Dinner served

Soils Primer for OSSS Summer Tour, Harney County

~Ed Horn and Mark Keller—OSSS Past Presidents and Harney Co. Soil Mappers

Approaching Burns you are not only entering the twilight zone but also the most northern part of the Basin and Range Province. The valleys in this province do not drain to the ocean. Water flows to the lowest points creating shallow lakes. As water evaporates out of these lakes, salts and minerals are left behind that build up over time.

This overview progresses from the basin floors to the basalt or tuff uplands to the highest mountains. Please refer to the Harney County General Soils Map for a spatial representation of the soils and the table at the end of the Sharpshooter for more information about the soils.

GSM 1 - The lowest areas of the landscape create sinks we call playas. The largest of these playas accumulate salt, although white and desolate appearing in summer, in the winter and early springtime when playas are filled with water, abundant shrimp and other invertebrates come to life. These playa lakes supply critical food for migrating waterfowl. Soils around the edges of these playas are poorly to moderately well drained and include the Alvodest, Droval, Borovall and Icene series. Dominant vegetation includes black greasewood, SAVE4, spiny hopsage GRSP, bud sage PIDE4, inland saltgrass, DIST, basin wildrye, ELCI2, alkali sacaton SPAI, alkali cordgrass SPGR, and indian ricegrass ACHY. Average annual precipitation is 7 to 10 inches.

GSM 2 - Stepping up from the playas and basins is a series of lake terraces and fans. Soils here are very deep, well drained and include the Spangenburg, Outerkirk, and Defenbach series. Higher up still, is a bathtub ring of rocky and sandy wave cut beach terraces and fans plastered against higher terrace escarpments. Soils associated with these terraces are the Enko and Catlow series. The dominant vegetative community for these soils include Basin big sagebrush ARTRT, Wyoming big sagebrush ARTRW8, black greasewood SAVE4, spiny hopsage GRSP, Indian ricegrass ACHY, and basin wildrye LECI4. Average annual precipitation is 8 to 10 inches (200 to 250 mm).

GSM 10 - In Harney County, there is an extensive lava plain upland that surrounds the basins. This area has an annual precipitation of 8 to 12 inches (250 to 300mm), and includes the most extensive soil mapping unit mapped in Oregon, “Raz-Brace complex 0 to 20% slopes”. Of course, Raz, Brace and Anawalt are the three most common soils found in this area. Raz is loamy textured and shallow to bedrock; Brace has a loamy textured argillic horizon and is moderately deep to bedrock; and Anawalt is shallow to clapan over bedrock. The vegetative plant community is Wyoming big sagebrush, ARTRW8, low sagebrush ARAR8, bluebunch wheatgrass, PSSP6, and Thurber’s needlegrass ACTH7. Depressions on this lava flow plain creates a distinctive wetland plant community comprised of Silver sage ARCA13, Nevada bluegrass PONE3, creeping wildrye LETR5, and mat muhly MURI. Swalesilver is the dominant hydric soil found in these depressions. Swalesilver is fine textured and somewhat poorly drained and is named for being in swales and having silver sage as its main vegetation component.

Heading into the Steens

Harney Co. Soils Primer—Cont'

GSM 11 - Moving higher in the landscape is a transition zone sandwiched between the lava plains and the highest elevations of the county. Common soils in this transition zone are the Ninemile, Westbutte and Carryback series. Dominant vegetation includes low sagebrush ARAR8, Scattered western juniper JUOC, mountain big sagebrush ARTRV, antelope bitterbrush PUTR, Sandberg bluegrass POSE, Idaho fescue FEID, and bottlebrush squirreltail ELEL5. Average annual precipitation is 12 to 16 inches (305 to 406 mm).

GSM 12 - In the northern part of the Harney County Soil Survey is another transition zone that moves from the Harney Basin at 4,100 ft. to the Malheur National Forest at 5,000 ft. elevation. Common soils here are the Merlin and Observation series. This zone has the largest concentrations of western juniper. Dominant vegetation includes Western juniper JUOC, curl-leaf mountain mahogany CELE3, low sagebrush ARAR8, mountain big sagebrush ARTRV, antelope bitterbrush PUTR2, Idaho fescue FEID, onespike oat-grass DAUN, and basin wildrye LECI4. Average annual precipitation is 12 to 16 inches (305 to 406 mm).

GSM 9 - The highest elevations in the county are in the Steens Mountains topping out at 9,734 ft. The common soils here are the Baconcamp and Clamp series. They have a cryic temperature regime and are the coldest soils in the county. Average annual precipitation is 12 to 40 inches (305 – 1270 mm). Dominant vegetation includes mountain big sagebrush ARTRV, western juniper, JUOC, mountain mahogany, CELE3, aspen POTR5, mountain snowberry SYOR2, low sagebrush ARAR8, Idaho fescue FEID, Sandberg bluegrass POSE, bluebunch wheatgrass PSSP6, rough fescue FECA4, and tufted hairgrass DECA18.

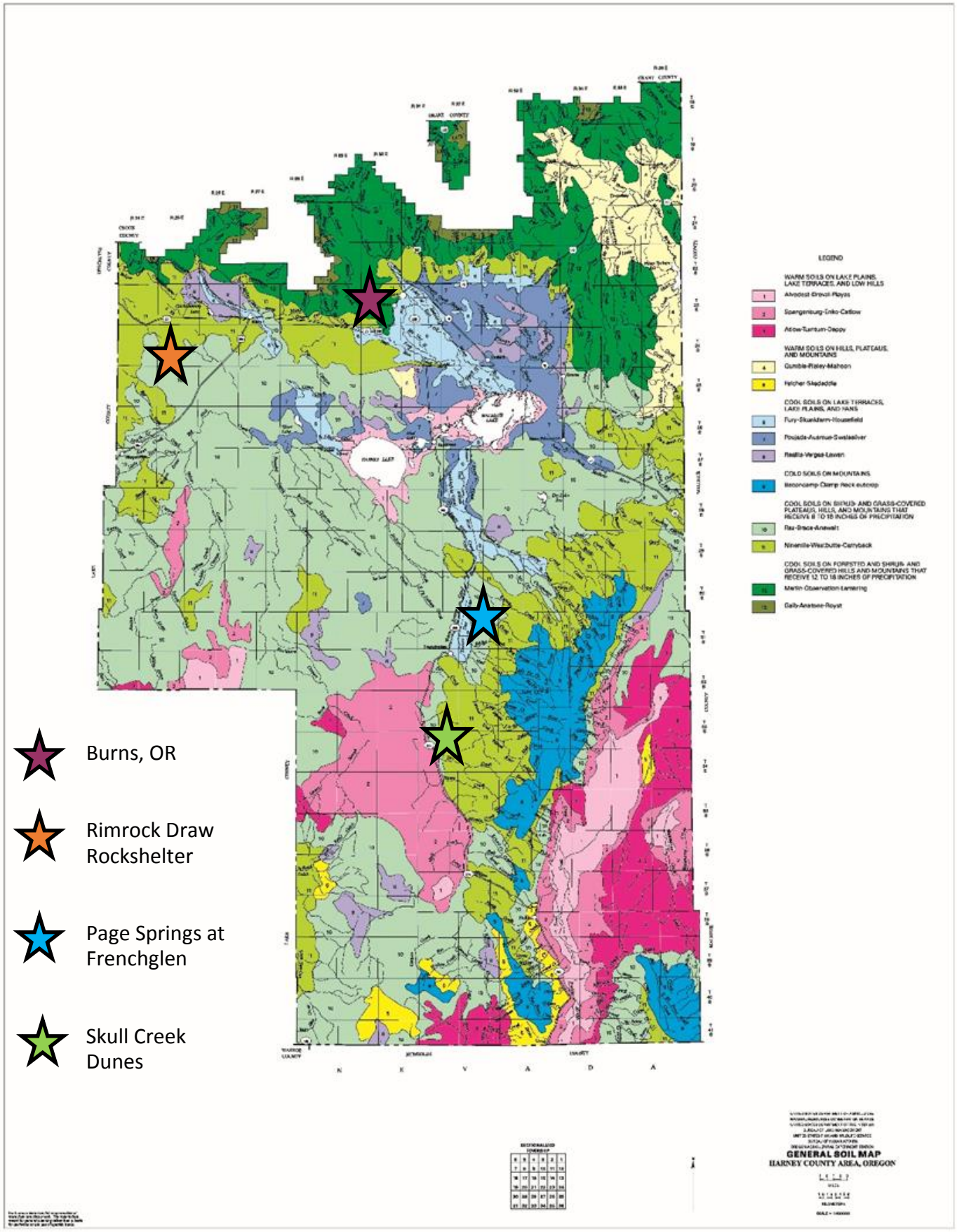
The tremendous variety in climate, elevation and parent materials over 6.5 million acres is why the Harney County Area Soil Survey has over 370 mapping units, 170 taxonomic units and 8 represented soil orders.

For a continuation of what is to come check out the wonderful table on page 17-19

Image: Baconcamp—Shannon's vote for best soil series name ever

Below is the link for the soil survey report of Harney County, as published 2006.
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Harney.pdf
Below is the link for General Soil Map of Harney County, as published 2006.
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Maps/gsm.pdf

Harney County Soil Map with Summer Tour Sites

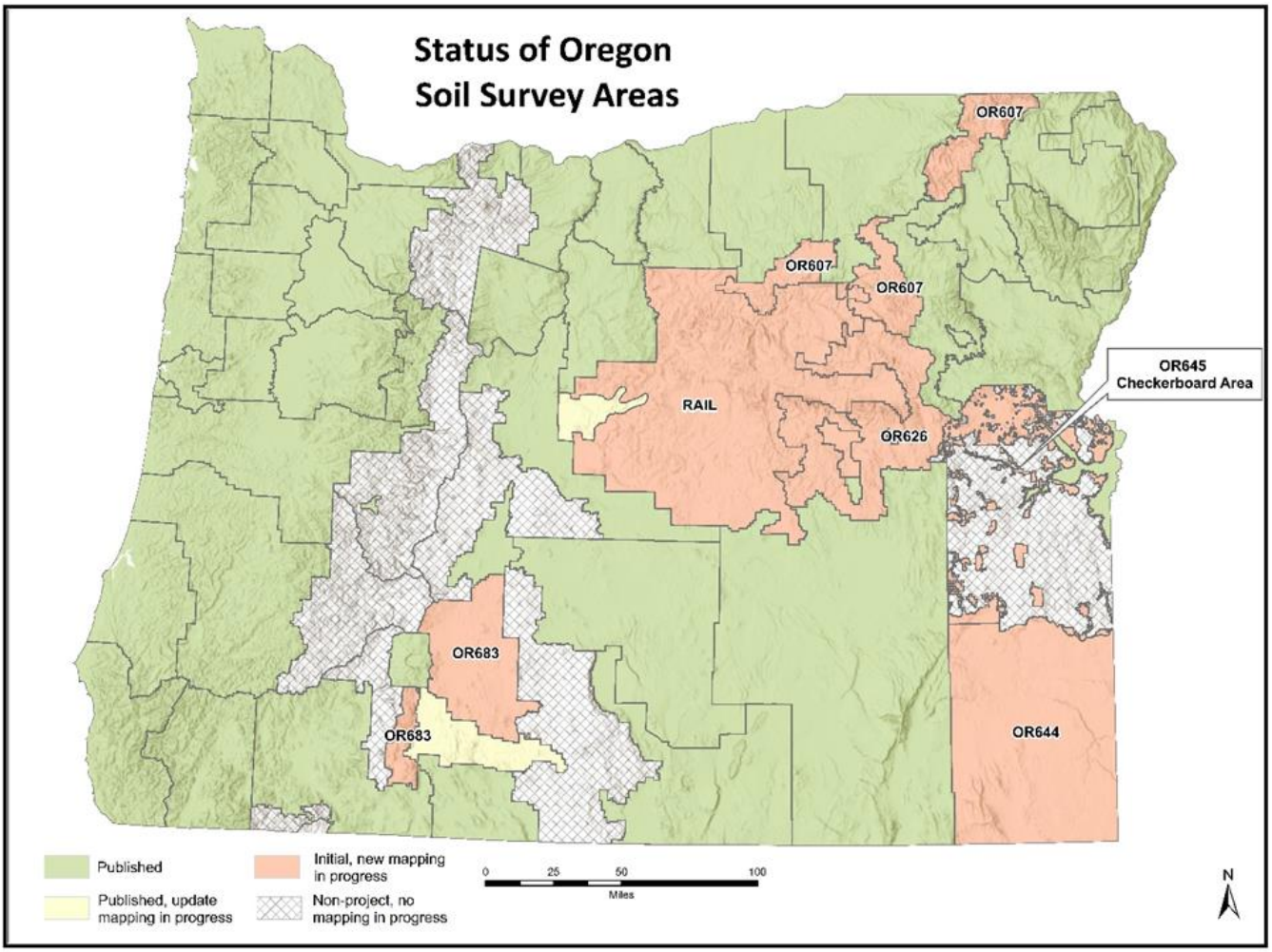


Soils Classifiers Needed!

~Tim Murphy CPSS—DLCD Farm and Forest Lands Specialist

There is a growing need for soil scientists, especially in central and eastern Oregon, who have experience in classification and are interested in working with property owners on land use applications. Owners of agricultural land who feel the Natural Resource Conservation Service's Web Soil Survey does not accurately reflect soils capability on their properties can hire a qualified soils scientist to conduct an Order 1 soils assessment. If soils with a lower capability rating are identified, the soils assessment may then be used by the property owner as part of a land use application to justify a non-farm dwelling or a zone change. Soils assessments are reviewed by the Oregon Department of Land Conservation & Development (DLCD) prior to submittal to the county for local land use review.

To participate, soils professionals must be a Certified Professional Soil Scientist (CPSS) or Certified Professional Soils Classifier (CPSC) in good standing with the Soil Science Society of America. Approved soils scientists are listed on the DLCD website, which is used by property owners when selecting a soils scientist http://www.oregon.gov/LCD/pages/soilsassessment.aspx. For additional information, contact Tim Murphy, DLCD Farm and Forest Lands Specialist, at 503-934-0048 or timothy.murphy@state.or.us.



Status of Oregon Soil Survey Area is accompanied by the NRCS Quarterly Update on next page

Natural Resources Conservation Service Quarterly Update

~Kyle Stephens—Soil Data Quality Specialist

I'm originally from Pennsylvania and I went to college at West Virginia University. In 2004, I accepted a position on the USDA-NRCS Spokane, Washington Soil Survey, making the Northwest my adoptive home. I have spent all 13-plus years of my career in the Northwest, mainly focused on initial soil surveys east of the Cascade Mountains. I'm currently a USDA-NRCS Soil Data Quality Specialist, located in Portland, Oregon, and I work closely with several Eastern Oregon Soil Survey offices. Oregon and Washington have unique geologic histories and I have been lucky to carve out a career mapping and correlating soils formed from Missoula floods and eruption of Mt. Mazama.

The soil survey has been completed for about ninety percent of the United States, resulting in most of the NRCS Soil Scientists working on updates to published soil surveys. Lucky for me, Oregon is one of the last states to have significant areas of active traditional initial soil surveys, which makes it a great place to be a USDA-NRCS Soil Scientist. Currently, Oregon has 6 active initial soil surveys, covering about 12 million acres. In addition, there is almost an equal amount of unmapped areas where no active mapping is occurring. It will take us a few years to complete the ongoing surveys and another 15 to 25 years before the entire state is mapped. While I have always hoped the digital age would accelerate our rate of mapping, I have come to the realization that the completion of accurate soil surveys will always take time due to the need for field data collection, progressive correlation, and database population.

The map on the previous page shows the status of all Oregon Soil Survey Areas. The table provides some brief information about each of the active initial soil surveys.

Survey Area Symbol	Survey Area Name	Overview	Current Staff
OR607	Umatilla National Forest	Mapping complete and data is expected to be published in 2017.	Rich Williams, La Grande
OR626	Malheur National Forest	About 800,000 acres remain unmapped. Northern portion of forest is complete and might be published in 2017.	Rich Williams, La Grande
OR644	North Malheur County	The checkerboard private lands in the northern portion of Malheur County are being mapped. The BLM lands currently are not being mapped. Private lands will be published in a few years.	Shanna Bernal Fields, Ontario
OR645	South Malheur County	This is a cooperative BLM and NRCS soil survey, focused on the BLM lands in the southern portion of Malheur County, with a strong emphasis on ecology. It's about 60% complete, but well over a million acres remain to be mapped.	Meghan Krueger, Vale Amanda Rice, Vale (BLM)
OR683	Winema National Forest	This includes new mapping on the Winema National Forest and update mapping in the published South Klamath Soil Survey. Most of the field work is complete but several more years are required before final publication.	Chris Gebauer, Klamath Falls Katie Chambers, Klamath Falls
RAIL	Crook, Grant, and Wheeler Counties	This survey area combines the Crook, Grant, and Wheeler County surveys. It includes significant areas of private, BLM, and USFS lands. Most of the field work is complete but a very large database workload remains. Data will be published in a few years.	Kurt Moffitt, Redmond Gabriella Coughlin, Redmond

Bureau of Land Management Quarterly Update

~Marissa Theve, BLM soil scientist in Salem, OR—New West Side Director!

Bio: Marissa started at BLM this September after 6 years of mapping for NRCS at the 12-TOL office in Connecticut, covering 14 million acres of glaciated soil including NYC and near-shore subaqueous soil. After her 2016 summer detail mapping in southwest Wyoming, Marissa continued west and now resides in Salem where she covers the Cascades and Marys Peak field offices. While off-duty, Marissa likes to teach and practice yoga, brew and taste beer, read, garden, hike, make glass art, beach, foster dogs, and see live music. After being involved with the Society of Soil Scientists of Southern New England since 2008, she's excited to team up with OSSS.

BLM Update:

A team is working on spatial edits of the Timber Productivity Capability Classification (TPCC) database using modern techniques and updated thresholds. The original TPCC was heads-up digitized from aerial photos with on-site field verification in the 1980s. This spatial data is still in use today with user edits infrequently incorporated. A draft iteration is expected out this summer using LiDAR derivatives, climatic modeling, plant associations, Soil Survey where available, and other data.

The annual Oregon BLM Soil, Water, and Air meeting was held April 17-20th 2017 in Bend, OR with presentations such as mobile data collection with S1 app, Soil Survey limitations, TPCC update, gSSURGO, and many other topics. Thursday field day consisted of a tour of Beaver Dam Analog tour and talk.

The new Northwest Oregon Regional Management Plan (NORMP, August 2016) requires soil disturbance post-monitoring, so BLM is using the US Forest Service Soil Quality Monitoring protocol (https://www.fs.fed.us/soils/monitoring.shtml). First author Deb Page-Dumroese provided Oregon BLM employees with an in-field training on Tuesday June 20th out of the Springfield office. The training included a half-morning session indoors with an afternoon of discussion and transects in the field. A GIS tool is also being developed to predict maximum possible new soil disturbance on timber sales for the NORMP by assigning widths to projected lengths of cable corridors, skid trails, roads, and landings and deleting overlaps.

Julie Turner, Siuslaw Resource Area soil, water, and air specialist, reports having a new well drilled this summer to look at the northern groundwater influence supporting water quality monitoring on West Eugene Wetlands (WEW). These data will provide a seasonal water budget for WEW and add help to determine if Amazon Creek is a gaining or losing stream. Water chemical analysis will also be performed as the creek is a designated Clean Water Act impaired water.

Grants Pass Resource Area soil scientist Jay Wise is investigating use of soil chemistry as an indicator of reforestation success. Analytical chemistry will be used to gain soil nutrient status, which may help specialists predict seedling survival and potentially impact BLM planting activities.

OSSS joins AGSS from OSU during their Warkentin Lecture series tour of Corvallis Soils—May 22, 2017—THANKS VANCE AND TRANG!

Updates to Soil Science Society of America's Soils Certification

~Cory Owens, SSSA Certification Board, OSSS Past-President

The Soil Science Society of America's (SSSA) Soils Certification Board initiated new changes to professional soils certification that went into effect January 2017. Here is some background on the changes and an explanation of the new system:

- The SSSA Soils Certification Board has, since 1977, has been strongly committed to recognizing emerging issues and bringing experts together to craft timely and appropriate changes to the Certified Professional Soil Scientist certification while maintaining the core values the certification is based on.
- These efforts over the last 40 years continue to ensure that the soils profession has consistent and recognizable national standards.
- The most recent changes include moving to a three tier system of certification, rearranging how the exams are offered, and introducing a new level:
  - Three Tiered Soils Certification:
    - Licensure -Under the new system the Professional Practice Exam will be maintained for states who have successfully achieved licensure for professionals practicing soil science. There are currently nine states that require licensure and have the option of using the SSSA's Soils Professional Exam in their requirements.
    - Certified Professional Soil Scientists (CPSS)- All requirements are the same except only the Fundamental Exam is required.
    - Certified Soils Technician (CST)-The Certification Board's new CST is an opportunity for those folks who are working in the field of soil science but may not yet meet the requirements for CPSS. The Fundamental Exam is required along with education and work experience similar to that of a Certified Crop Advisor.

CPSS vs. CST:

A CPSS is an individual who has demonstrated knowledge in all aspects of soil science with developed specialization in one or more sub-disciplines. CPSSes are recognized around the country for their expertise and often the certification is required by states to perform specific activities. A Certified Soil Technician (CST) is an individual who works directly in disciplines where understanding soils and soil processes are critical to making sound decisions. They have the qualifications and demonstrated competency to practice soil science in a technical capacity. A CST can become a CPSS by gaining the required additional education and professional experience.

I am happy to answer any questions folks have on the changes corycowens@gmail.com.

My trip to Vienna, Austria

~Trang Nguyen—OSU Soil Science PhD Candidate

In April 2017, I was invited to share my work with the European Geoscience Union by Dr. Mary Stromberger from Colorado State University. My research interest fits very well with the session about carbon and nutrient cycling in biological activity hot spots in soil. I work to provide insights about the diversity and distribution of extracellular microbial proteolytic enzymes that regulates organic nitrogen decomposition.

Figure 1. Me and my supervisor, Dr. David Myrold, in front of the banner of the conference

I took the invitation and applied for travel funds from the Graduate school and the department. I was lucky to get both funds, plus the support from our grant, to cover for my trip across the Atlantic Ocean to Vienna, Austria. It was an excellent experience and an eye-opening opportunity for me. I was introduced to an expanded science community, I learned the science culture in Europe and how it differs from science culture in America. I met people who I only knew through articles, Dr. Ellen Kandeler, Dr. Christina Kaiser, Dr. Andrea Richter, Dr. Johannes Rousk, Dr. Stephen Wirth, whom I have cited and admired for years. I started to understand where they come from and how they do science.

Figure 2. I got a chance to visit the division of Terrestrial ecosystems research in University of Vienna and it was a huge pleasure to be hosted by two head scientists here, Dr. Christina Kaiser (left) and Dr. Andrea Richter (right). Analytical power contributes a significant role to the amount of high quality science that ones can produce, a note to myself and maybe to the policy makers as well, please invest on science as you will earn more than what you give.

It was great to be a part of this international science community with 14,496 geoscientists from 107 countries. I was fascinated by the research questions and the analytical technologies that are being used to help answer research problems. There were a presentations regarding the modelling of the changes of carbon stocks in soils, describing hot spots and hot moments of biological activity in the soil profile, and characterizing the interaction between microbial community and plant roots in the rhizosphere. The question kept coming back to how might the terrestrial ecosystems as a respond to climate change on the grand scale. This trip helped me stay updated with the movement of science and made me feel much more motivated in the work that I am doing at Oregon State University.

Please follow me by an adventure through pictures and captions.

Figure 3. We are Vietnamese scientists from Germany, Netherland, Korea, and US. We are hydrologists, hydraulic scientists, geologists, and soil scientists. These people are incredible and doing so many fascinating works. I was so lucky to meet up with these folks in the heart of Vienna (me, second from the right).

OSU Soil Judgers National Competition

~Kris Osterloh—OSU Soil Judging Coach, PhD Candidate

I'm pleased to inform you all of OSU's strong performance at the 2017 National Collegiate Soils Contest. My Alma Mater, Northern Illinois University, hosted the contest in Dekalb, about an hour west of Chicago. The team spent 4 days practicing and describing soils formed on loess mantled till plains, glacial outwash, and eolian sand.

We had a team of entirely new judges and they placed 15th overall, which is better than we have done in several years. Nathan Clark, who has only taken Soils 205, got 14th in the individual contest out of 94 competitors. I look forward to having a strong returning team for next year's contest in Martin, Tennessee.

Help us continue our journey: https://www.gofundme.com/osu-soil-judging

Mollisol developed on eolian sand

Benny the Beaver watching over the group

Several teams describing a pit—individual contest

Getting pumped for group competition! From left: Eleanor Wershow, Ben Crew, Nathan Clark, Laura Rathbun

Nathan getting his samples from each horizon

Group competition in Wisconsin Loess over Tiskilwa Till

Laura getting messy in some N2.5/0 alluvium

Treasurer's Report Summary of Income and Expenses

~Pam Keller - OSSS Treasurer

Income:

Uncategorized income, but consists of dues plus 2017 winter meeting registrations, minus PayPal transaction fees. **$ 4537.87**

Dues **$ 150.00**

Total Income **$ 4687.87**

Expenses:

2017 Winter Meeting Lodging	**$ 598.00**
2017 Winter Meeting Food	**$ 1111.00**
Liability Insurance, Annual Premium	**$ 270.00**
Administrative Expense: PO Box annual fee and postage	**$ 103.05**
Monthly charges for PayPal Pro and MembershipWorks	**$ 232.00**
Oregon Sec. of State Corporation Annual Renewal for FY14 and FY15	**$ 100.00**
Oregon Dept. of Justice Annual Report fees for FY14 and FY15	**$ 20.00**
Oregon Dept. of Justice Annual Report late charges for FY14 and FY15	**$ 120.00**
Oregon Income Tax for 4 past years	**$ 600.00**
Oregon Income Tax late charges	**$ 199.15**
Federal Income Tax for 2 past years	**$ 622.62**
Uncategorized expense	**$ 90.00**
Total Expenses	**$ 4065.82**

FY16 Income – Expenses = $ 622.05

Notes:

FY16 had a lot of expenses for back taxes which won't occur in the future. We may, in fact, see refunds of some of these taxes and fees.

Expected upcoming expenses include reimbursements for some 2017 Winter Meeting expenses and web-site domain fees.

When OSSS applies for tax-exempt status, the application fee might be as much as $900.

PayPal Pro and MembershipWorks services have been cancelled. Transaction fees for web processing of payments will still occur.

FY17 starts July 1, 2017

Membership Report as of June 2017

Lifetime members	25
Student members	13
Professional members	24
Total members	62

Rimrock Draw Rockshelter:

Sediments and Revealing Human Prehistory

August 24th, 2017 7:00pm
At the Harney Co. Chamber of Commerce

The Oregon Society of Soil Scientists invites the public to join us for a talk by:

Scott Thomas

The history has been captured and recorded in the soils and sediments.

See evidence of volcanic eruptions, ancient lake beds, major changes in the climate, and tools from early N. American settlements.

Special Guest Nancy Pobanz to discuss:
From Earth to Easel: Making Pastels and Paints from Sediment & Rocks Found in Nature

Wine and cheese will be served with plenty of time for questions and discussion

Donations will go to the OSU Soil Judging team

For more info: http://oregonsoils.org

OREGON SOCIETY OF Soil Scientists

Past-Presidents Society - Presidents matter!

~James Cassidy – 2017-2018 Vice President

1974-1975	G. H. Simonson
1975-1976	G. H. Simonson
1976-1977	Clair Silvernale
1977-1978	Moyle Harward
1978-1979	Herb Huddelston
1979-1980	Hal Legard
1980-1981	Roger Borine
1981-1982	Bob Paeth
1982-1983	Dave Mauer
1983-1984	Alan Terrell
1984-1985	Steve Shade
1985-1986	Bob Maurisse
1986-1987	Jerry Latshaw
1987-1988	Gary A. Kitzrow
1988-1989	Russ Langridge
1989-1990	Bruce Arndt & Russ Langridge
1990-1991	Sue Carlson
1991-1992	Matt Fillmore
1992-1993	John Good
1993-1994	Alan Mitchell
1994-1995	Scott Burns
1995-1996	Allen Makinson
1996-1997	Todd Peplin
1997-1998	Ed Gross
1998-1999	Brian Rabe
1999-2000	Craig Busskohl
2000-2001	John Depuy
2001-2002	Bob Ottersberg
2002-2003	Jay Noller
2003-2004	Tom Clark
2004-2005	Mark Keller
2005-2006	Kathy Verble
2006-2007	Ed Horn
2007-2008	Will Austin
2008-2009	James Cassidy
2009-2010	Danny Moreno
2010-2011	Cory Owens
2011-2012	Josh Owens
2012-2013	James Cassidy
2013-2014	Teresa Matteson
2014-2015	Markus Kleber
2015-2016	Gabriella Coughlin
2016-2017	Gabriella Coughlin
2017-2018	Shannon Andrews

8 past presidents at AGSS Warkentin BBQ. Can you name them all?

Here again I find myself entering into the fray of OSSS leadership! …as vice prez for the 3rd time in 10 years! Why? Easy – We are a fun, funny, stimulating, smart, interesting, and inspiring bunch! No other institution I have been involved with in my soils journey allows for such a free and energetic exchange of ideas, fun, thoughtful, and creative interaction about real stuff – the people that make up the OSSS is what keeps me around and wanting more. I have made many life-long friends being involved in the OSSS over all these years and it is a true honor to have been asked to serve again. Thanks! Being thrust into wheelhouse again got me thinking about all the others who have come before me and what it might have been like in the old days. That, and a recent visit to OSU by Dr. James Bockheim for the Department of Crop and Soil Science annual Warketin Lecture hosted by Association of Graduate Soil Scientists (AGSS) brought many past and present members out of the woodwork. A terrific BBQ followed with great food and a rare opportunity to get 8 post Presidents in one place for an historic photo.

The photo of so many past presidents got me thinking who came before even the most senior folks present. Between Cory Owens, Scott Burns, Ed Horn, and I we put together a pretty good list here! Please look it over and see if there are any errors or omissions and let's get it corrected.

Talking with Scott on the subject gave rise to the conversation about past editions of the sharpshooter from the days of yore and he told me he has a whole bunch of them. It has become a dream of mine to assemble a complete set. Please contact me with the dates and issue numbers of any sharpshooters that you might have especially from the pre-electronic era – before 2008(?). Then I will ask for what I need, scan them, and post to the archive on the website. Maybe at the next meeting you can bring hard copies for a display and discussion at the poster session no-host bar or something!

One of my goals coming into my up-coming presidency is to ask us to hard look at ourselves and come to some consensus as to who and what we are and where we are going. Having the old sharpshooters should be very interesting for all and give us a glimpse into the past to see what our meetings, presentations, field trips, from the way-back machine were like and maybe revisit some of those locations and topics to chart the way forward. Knowing the past, evaluating the present, and looking forward! Will you join me?

OREGON SOCIETY OF
Soil Scientists

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PO BOX 391
Corvallis, OR 97339

Or register at: http://oregonsoils.org

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Non-OSSS Members Tour Reg - $110
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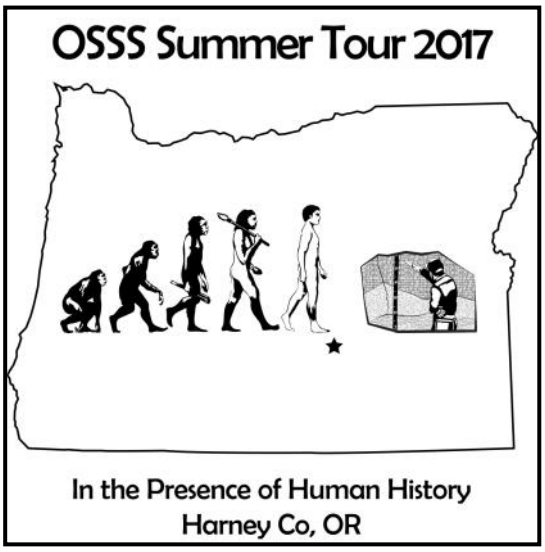

Yes! I want to join the OSSS Summer Tour Aug 25-26

Name_____

Email address_____

Phone number_____

Emergency contact name_____

Emergency contact number_____

Dietary Restrictions_____

Contact me regarding group transportation/carpooling_____

T-shirt design by Adam Lindsley featured on back of a brown shirt. The OSSS logo you see on each page will be in black and white, small, and in the upper left corner of the shirt

Please make a one time only commemorative T-shirt for me
(Shirts will be ordered on Aug 1. Registrations must be in by Aug 1 to purchase T-shirt)

Size: XS S M L XL XXL Cut: Curvy Straight

OSSS Member Status_____

Wait! I also want to sign up for membership

Physical address_____

Current employer_____

Job title/Relationship to soil_____

OSSS is a society about connecting with other Soil Scientists. If you like, you can introduce yourself here with a couple of lines, and we will put it in the next Sharpshooter Membership Report. Would you like your comments and contact info to be public? Yes or No

Give us a couple of lines about yourself to help connect you to our community

_____

_____

GSM	Series	Classification	Depth	Drainage	Annual PPT	Landform	Vegetation
1	Alvodest	Fine, smectitic, mesic, Sodic Aquicambids	Very Deep	Somewhat Poorly to Moderately well Drained	8 in	Basin floors	black greasewood, basin wildrye and inland saltgrass
1	Droval	Fine, smectitic, mesic, Sodic Aquicambids	Very Deep	Somewhat Poorly Drained	8 in	Desert valley floors	big sagebrush, black greasewood, spiny hopsage, Indian ricegrass, basin wildrye, and bottlebrush squir-
1	Boravall	Fine, smectitic, calcareous, mesic, Aeric Halaquepts	Very Deep	Poorly Drained	8 in	Lakebeds	inland saltgrass, alkali sacaton, alkali cordgrass, and alkali bluegrass
1	Icene	Fine-loamy, mixed, superactive, mesic Typic Aquisalids	Very Deep	Moderately Well Drained	9 in	Lake terraces	black greasewood, shadscale, spiny hopsage, basin wildrye, bud sagebrush, and Indian ricegrass
2	Spangenburg	Fine, smectitic, mesic Xeric Palegrids	Very Deep	Well Drained	9 in	Low lake terraces	basin big sagebrush, Wyoming big sagebrush, Thurber needlegrass, bottlebrush squirreltail, Sandberg bluegrass, Indian ricegrass,
2	Outerkirk	Coarse-loamy, mixed, superactive, mesic Durinodic Haplocalcids	Very Deep	Well Drained	8 in	Alluvial fans and basin floors	big sagebrush, black greasewood, spiny hopsage, Indian ricegrass and basin wildrye

Soil survey report of Harney County, as published 2006.
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Harney.pdf
General Soil Map of Harney County, as published 2006.
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Maps/gsm.pdf

GSM	Series	Classification	Depth	Drainage	Annual PPT	Landform	Vegetation
2	Defen-baugh	Fine-loamy, mixed, superac-tive, mesic Typic Haplocambids	Very Deep	Well Drained	8 in	Alluvial fans	shadscale, black greasewood, bud sage-brush, and bottlebrush squirreltail
2	Enko	Coarse-loamy, mixed, superac-tive, mesic Durinodic Xeric Haplocambids	Very Deep	Well Drained	9 in	Fan rem-nants & swales	big sagebrush, Douglas rabbitbrush, phlox, Sandberg bluegrass, bottlebrush squirrel-tail, and cheatgrass
2	Catlow	Loamy-skeletal <18, mixed, su-peractive, mesic Durinodic Xeric Haplocambids	Very Deep	Well Drained	10 in	Beach & Lake Ter-races	Wyoming big sage-brush, bluebunch wheatgrass, Sand-berg's bluegrass, Thur-ber's needlegrass, and bottlebrush squirreltail
10	Raz	Loamy, mixed, frigid, shallow Xeric Hap-lodurids	Shallow to Duripan	Well Drained	9 in	Lava plat-eaus	Wyoming big sage-brush, bluebunch wheatgrass, Thurber's needlegrass, bottle-brush squirreltail, and
10	Brace	Fine-loamy, mixed, superac-tive, frigid Xeric Argidurids	Moderately Deep to Duripan	Well Drained	12 in	Lava plat-eaus, hills, structural benches	Wyoming big sage-brush, bluebunch wheatgrass, Sand-berg's bluegrass, and arrowleaf balsamroot
10	Anawalt	Clayey, smec-titic, frigid Lithic Xeric Haplargids	Shallow	Well Drained	10 in	Lava plains, plateaus, hills, and mountains	Low sagebrush, blue-bunch wheatgrass, Sandberg's bluegrass, Thurber's needlegrass, bottlebrush squirreltail
10	Swalesilver	Fine, smectitic, frigid Aquic Palexeralfs	Very Deep	Somewhat Poorly Drained	11 in	Depres-sions on plateaus and lake terraces	Silver sagebrush, Ne-vada bluegrass, creep-ing wildrye, and mat muhly

Soil survey report of Harney County, as published 2006.
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Harney.pdf
General Soil Map of Harney County, as published 2006.
https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Maps/gsm.pdf

GSM	Series	Classification	Depth	Drainage	Annual PPT	Landform	Vegetation
11	Ninemile	Clayey, smectitic, frigid Aridic, Lithic Ar-	Shallow	Well Drained	14 in	Hills, mountains, and plat-	Low sagebrush, Sandberg bluegrass, Idaho fescue, and bottle-
11	Westbutte	Loamy-skeletal >18, mixed, superactive, frigid Pachic Haploxerolls	Moderately Deep	Well Drained	15 in	Tops and north facing hill, plateau and mountain side slopes	Scattered western juniper, mountain big sagebrush, antelope bitterbrush, Idaho fescue, bluebunch wheatgrass, Sandberg bluegrass
11	Carryback	Fine, smectitic, frigid, Vertic Palexerolls	Moderately Deep	Well Drained	12 in	Tablelands	low sagebrush, Idaho fescue, bluebunch wheatgrass, and Sandberg bluegrass
12	Merlin	Clayey, smectitic, frigid Lithic Argixerolls	Shallow	Well Drained	15 in	Lava plateaus, and hills	low sagebrush, antelope bitterbrush, buckwheat, bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass
12	Observation	Fine, smectitic, frigid Typic Argixerolls	Moderately Deep	Well Drained	14 in	Mountains and hills	Mountain big sagebrush, Idaho fescue and bluebunch wheatgrass
9	Baconcamp	Loamy-skeletal >18, mixed, superactive, Pachic Cryoborolls	Moderately Deep	Well Drained	16 in	Mountains, hills, and canyons	mountain big sagebrush, mountain snowberry, Idaho fescue, rough fescue, and tufted hairgrass
9	Clamp	Loamy-skeletal, mixed, superactive Lithic Hap-	Very Shallow and Shallow	Well Drained	18 in	Mountains, hills, and canyons	low sagebrush, Idaho fescue, Sandberg bluegrass, and bluebunch

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https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/oregon/OR628/0/Harney.pdf
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SHARPSHOOTER

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

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$500.00	Lifetime Member

News Items:
Remember all articles submitted to the Sharpshooter can be emailed to the Sharpshooter editor (see below) in most any text, http, or word processing format. Pictures are best in 300 dpi jpg format.

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