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**NATIONAL CONFERENCE
ON WEIGHTS AND
MEASURES**

102ND ANNUAL MEETING**JULY 16 - 30, 2017****PITTSBURGH, PENNSYLVANIA**

Registration and lodging information for the July meeting is available online at:
https://www.ncwm.net/sems/event_detail/2017-annual-pa

The meeting schedule, and supporting documents will also be located at this web location when they become available.

**OFFICE OF WEIGHTS
AND MEASURES**

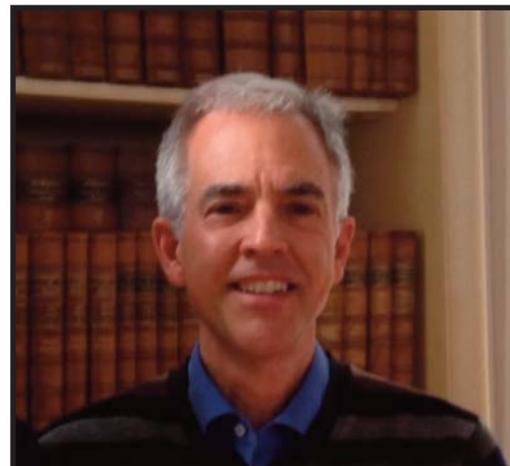
General Inquiries: (301) 975-4004;
e-mail: owm@nist.gov

Chief: Douglas Olson;
e-mail: dolson@nist.gov

Newsletter Editor: Linda Crown;
(301) 975-3998;

e-mail: linda.crown@nist.gov

**The Office
of Weights
and
Measures
Welcomes
Douglas
Olson**



Douglas Olson is a career employee of the National Institute of Standards and Technology (NIST) and has taken over a new role as the Chief of the Office of Weights and Measures (OWM). The office is excited to have his leadership and looks forward to working with him.

Doug started at NIST in 1987 after receiving his Ph.D. in mechanical engineering. He grew up in Corvallis, Oregon, is married, and has two grown sons. He has spent most of his career in scientific metrology and through 2014 was the leader of the high pressure standards project. In that capacity, he established NIST as a world leader in pressure metrology, developed new pressure standards and measurement methods, and published widely in the field. He has represented NIST nationally and internationally in pressure working group activities. In collaboration with National Voluntary Laboratory Accreditation Program (NVLAP), he developed a proficiency testing program for pressure standards for which he and colleagues received the NIST Judson C. French Award. Doug has been a training instructor for the Measurement Science Conference (MSC), Sistema Interamericano de Metrologia (SIM), and NIST.

Prior to becoming Chief of the OWM, he spent two years on detail to the International Bureau of Weights and Measures (BIPM) in Sevres, France, as the executive secretary of the Joint Committee of the Regional Metrology Organizations and the BIPM Joint Committee of the Regional Metrology Organizations (JCRB). In this capacity, he administered the system for which calibration and measurement capabilities of the National Metrology Institutes (NMIs) are peer-approved for inclusion into the Key Comparison Database. While at the BIPM, he was instrumental in establishing a training program for NMIs to become more effectively engaged in the mechanisms of the International Committee for Weights and Measures (CIPM) Mutual Recognition Arrangement.

Testing Softwood Lumber

By David Sefcik

Over the last couple of years, several states have requested guidance on how to test softwood lumber. Currently, there is no test procedure for softwood lumber in NIST Handbook 133, "Checking the Net Contents of Packaged Goods," although a method of sale does exist in NIST Handbook 130, "Uniform Laws and Regulations," under Section 2.10. Softwood Lumber.

Method of Sale

2.10.3. Quantity. – Representations shall be in terms of:

- (a) the number of pieces;
 - (b) the minimum dressed width and thickness or actual width and thickness, except that the use of nominal dimensions shall be allowed as long as:
 - (1) The term "nominal" or "nom" is also used, and
 - (2) The actual or minimum dressed sizes are prominently displayed to the customer either by means of a table or label.
 - (c) either the length of individual pieces or the lineal footage.
- (Amended 2016)

The method of sale for Section 2.10. Softwood Lumber was recently revised (as reflected above) with language adopted at the National Conference on Weights and Measures (NCWM) Annual Meeting in July of 2016. The revisions are now aligned with the NIST Voluntary Product Standard PS 20-15, "http://gsi.nist.gov/global/docs/vps/approved%20PS20-15%20SSD%20final%202-25-15_dfa%20April%201st_wCover.pdf."

The role of the NIST Voluntary Product Standards Program (VPS) in the establishment of a Voluntary Product Standard for "American Softwood Lumber Standard" is to act as an unbiased coordinator in the development of the standard, provide editorial assistance in the preparation of the standard, supply assistance and review as is required to assure the technical soundness, and to seek satisfactory adjustment of valid points of disagreement. This standard is published as a public document.

During the week of August 22 to 26, 2016, the NIST Office of Weights and Measures taught a course at the NIST Gaithersburg, Maryland, campus on NIST Handbook 133 (Chapter 4), which focused on products primarily sold by linear measure, length, width, area, and thickness.

In recognizing the need for a NIST Handbook 133 test procedure for softwood lumber, the NIST Office of Weights and Measures worked closely with the American Lumber Standards Committee and the California Division of Measurement Standards (who have taken a leadership role in the development of test procedures for their state). A draft of the test procedure was introduced during the August training class to participants from the NIST "Train the Trainer" program, who assisted in providing valuable feedback. The eight participants represented Arizona, California, Connecticut, Michigan, West Vir-

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Training and Events Calendar

2017

Registration for training in the NIST Office of Weights and Measures is handled by Yvonne Branden at yvonne.branden@nist.gov.

Course descriptions can be viewed on the Office of Weights and Measures website at - <http://www.nist.gov/pml/wmd/calendar.cfm> and clicking on the name of the course.

February 13 - 17 (5 days)
Fundamentals of Metrology
Class No. 5434
NIST/Gaithersburg, MD

February 16 (2 hr)
Webinar - Conducting an Effective Management Review
2:00 p.m. - 4:00 p.m.
Class No. 5416

February 23 (2 hr)
Webinar - Basic Uncertainty Concepts
2:00 p.m. - 4:00 p.m.
Class No. 5446

March 2 (2 hr)
Webinar - Internal Auditing Best Practices
2:00 p.m. - 4:00 p.m.
Class No. 5420

March 13 - 17 (3 days)
Handbook 133, "Checking the Net Contents of Packaged Goods" - Basic
Class No. 5461
Springfield, IL

March 13 - 24 (10 days)
Mass Metrology Seminar
Class No. 5435
NIST/Gaithersburg, MD

March 21 (2 hr)
Webinar - Lab Metrology Info. Hour - Risk Assessments for the Essentials of Traceability
2:00 p.m. - 3:00 p.m.
Class No. 5482

March 27 - 29 (16 hr)
Administrators Workshop
Class No. 5495
NIST/Gaithersburg

March 27 - 31 (4.5 days)
Handbook 133, "Checking the Net Content of Packaged Goods" - Basic
Class No. 5471
Raleigh, NC

March 28 - 30
NTEP Lab Meeting
Annapolis, MD
Contact: info@ncwm.net

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ginia, and Wisconsin. With their input and feedback, NIST OWM will be able to submit (in 2017) a proposal to NCWM for a NIST Handbook 133 test procedure for Softwood Lumber.

For more information, please contact David Sefcik at david.sefcik@nist.gov, or (301) 975-4868. You may also contact Lisa Warfield at lisa.warfield@nist.gov, (301) 975-3308.

Education Outreach Thrives within the Office of Weights and Measures

[POC: Elizabeth Gentry, elizabeth.gentry@nist.gov, x3690, PML OWM]

The Office of Weights and Measures (OWM) is well known for their International Association for Continuing Education and Training (IACET) accredited technical training program, but you may not have heard about their ongoing education outreach efforts. Increasing knowledge and use of the International System of Units (SI) is a primary focus of OWM's Metric Program. Ms. Elizabeth Gentry, Metric Coordinator, champions these efforts as part of the OWM Operations Plan, which includes an annual service goal of conducting at least 10 outreach sessions and 500 contacts.

Since 2011, staff have participated in over 130 events reaching over 28,000 students, parents, and teachers (Figure 1). The transfer of metrology and SI information is conducted in a variety of venues, including national conferences, local school districts, and NIST programs. Hands-on activities are aligned with the audience, whether it's a classroom enrichment activity for K-12 students or teacher professional development.

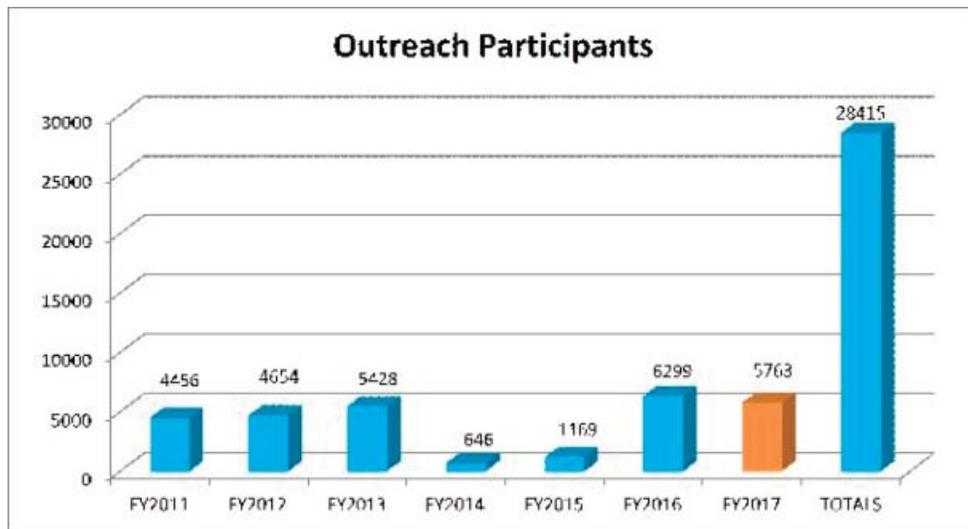


Figure 1. OWM has conducted outreach for over 28,000 participants since 2011. (continued on pg 4)

**CHECK OUT THE NEW CLASSES ADDED TO THE
TRAINING AND EVENTS
CALENDAR FOR 2017**

April 3 -5 (3 days)
Southeastern Measurement Assurance Program (SEMAP)**
Class No. 5464
Raleigh, NC

April 24 - 27 (4 days)
Caribbean Measurement Assurance Program (CaMAP)**
Class No. 5465
Bayamon, PR

April 24 - 28 (4.5 days)
Handbook 130, Uniform Packaging and Labeling Regulations
Class No. 5483
Dallas, TX

May 1 - 4 (4 days)
Western Regional Assurance Program (WRAP)
Class No. 5466
Helena, MT

May 2-3
Multiple Dimension Measuring Devices (MDMD) (May 2)/MDMD and Software Sector Meeting (May 3)
Columbus, OH
Contact: info@ncwm.net

May 15 - 18
Northeastern Weights and Measures Association (NEWMA)
Saratoga Springs, NY
Contact: James Cassidy
E-mail: jcassidy@cambridgema.gov

May 15 - 26 (10 days)
Mass Metrology Seminar
Class No. 5436
NIST/Gaithersburg, MD

May 22 - 25 (4 days)
Central Weights and Measures Association (CWMA) Annual Meeting
Lincoln, NE
Contact: Sherry Turvey
E-mail: sherry.turvey@ks.gov

May 22 - 25 (4 days)
Medium-Capacity Scales
Class No. 5463
Held in conjunction with CWMA Meeting
Lincoln, NE

June 5 - 9 (4.5 days)
Fundamentals of Metrology
Class No. 5487
NIST/Gaithersburg, MD

June 12 - 16 (5 days)
Volume Metrology Seminar
Class No. 5441
NIST/Gaithersburg, MD

June 19 - 30 (10 days)
Metrologia de Masas
Class No. 5448
NIST/Gaithersburg, MD

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OWM staff volunteer at events in the local community, especially those held on the NIST campus. Hosting sessions for Take Our Daughters and Sons to Work Day, Adventures in Science, Science Get Psyched primarily focus on middle school aged students (Figure 2). However, hands-on activities are also adapted for kindergarten aged students from the NIST Child Care Center.



Figure 2. Tina Butcher (OWM) volunteers at NISTs Take Our Daughters and Sons to Work Day (April 2016).

OWM partners with American Society for Quality-Measurement Quality Division (ASQ-MQD) and NCSL International (NCSLI), State Weights and Measures and industry metrologists to promote Metrology Careers at several national events, including the American Society of Engineering Education (ASEE) Annual Conference and annual Science Technology and Engineering Partnership (STEP) Conference (Riverside, CA). At partnership events, a variety of additional NCSLI and ASQ resources are also distributed, including Joe D. Simmons Scholarship resources, MetrologyCareers.com postcards and color changing pencils, and professional certification body of knowledge fliers (e.g., Calibration Technician, Quality Auditor, and Quality Engineer).

American Society of Engineering Education Conference (ASEE) New Orleans, LA (June 2016)

OWM has hosted a collaborative Metrology Careers exhibit with ASQ-MQD and NCSLI at the ASEE Conferences since 2007. Presenting papers and interacting in technical sessions has allowed for the exchange of ideas and opportunities to collaboration between local metrology ambassadors and universities. In June 2016, the 4-person exhibit team of Ms. Isabel Chavez (OWM), Ms. Elizabeth Gentry (OWM), Mr. Benjamin Jack (JM Test Systems), Ms. Heather Wade (ASQ-MQD, NSF International) addressed a wide variety of questions from conference attendees, including 81 individuals who participated in the 3 textbook drawings and 35 NIST publications requests. Mr. Benjamin Jack, a local NCSLI metrology ambassador, has been collaborating with Dr. Jafar Al Sharab, Northwestern State University (NSU, Natchitoches, LA), to develop a measurement science course. NSU engineering students visited the exhibit to share their interest in measurement science and learn more about metrology careers (Figure 3).

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June 20 - 22 (24 hr)
Handbook 130, Uniform Packaging and Labeling Regulations, short course
Class No. 5460
NIST/Gaithersburg, MD

June 20 - 21
Handbook 130, Uniform Packaging and Labeling Regulations, short course
Class No. 5460
NIST/Gaithersburg, MD

July 11 - 14 (24 hr)
Balance and Scale Calibration and Uncertainties
Class No. 5474
NIST/Gaithersburg, MD

July 16 - 20 (5 days)
National Conference on Weights and Measures Annual Meeting - 102nd Annual Meeting
Pittsburgh, PA
Contact: info@ncwm.net
http://www.ncwm.net/meetings

August 16 - 17 (2 days)
NTEP Grain Analyzer Sector Meeting
Kansas City, MO
Contact: Karl Cunningham
E-mail: karl.cunningham@illinois.gov

August 17 (2 hr)
Webinar - Contract Review
2:00 p.m. - 4:00 p.m.
Class No. 5421

August 21 - 31 (10 days)
Advanced Mass Seminar (Rev. 2015)
Class No. 5437
NIST/Gaithersburg, MD

August 22 - 23 (2 days)
NTEP Weighing Sector Meeting
Houston, TX
Contact: Rob Upright
E-mail: rob.upright@vishayppq.com

August 31 (2 hr)
Webinar - Document Control and Recordkeeping
2:00 p.m. - 4:00 p.m.
Class No. 5422

September 14 (2 hr)
Webinar - State Laboratory Annual Submission Process
2:00 p.m. - 4:00 p.m.
Class No. 5454

September 18 - 21
Northeastern Measurement Assurance Program (SWAP)**
Class No. 5467
Charleston, WV

September 24 - 28 (5 days)
Western Weights and Measures Association (WWMA) Annual Meeting
Scottsdale, AZ
Contact: Jeri Kahana
e-mail: jeri.m.kahana@hawaii.gov or Michelle Wilson
E-mail: mwilson@azda.gov

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Figure 3. Isabel Chavez, Heather Wade, and Benjamin Jack exchange ideas with Dr. Jafar Al Sharab and Northwestern State University of Louisiana engineering students at ASEE in 2016.

**Science and Technology Education Partnership (STEP) Conference – Riverside, California
(October 2016)**

This year was OWM’s 7th year participating in the three-day STEP Conference, held at Bourns Technology Center, Riverside, CA. Attendees included over 5,500 K – 12th grade students, teachers, and parents who were excited to learn about Science, Technology, Engineering, and Mathematics (STEM) career opportunities (<http://myscienceeducation.com/>).

The conference kicked off with the teacher professional development program, *Sea Change - Expanding the Role of Curiosity in Teaching & Learning*, designed to enhance STEM engagement with K-12 educators from the region. Ms. Gentry facilitated 3 hands-on *Metric Estimation Game* training sessions, which provided 180 teachers with a model activity designed to enable students to become familiar with metric system (SI) by practicing estimation skills using everyday household items (Figure 4).



Figure 4. Elizabeth Gentry facilitates a hands-on metric estimation activity during the STEP Conference teacher professional development event.

The next two days of the conference were devoted to hosting an interactive exhibit, where Ms. Lina Ng (Los Angeles County
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Department of Agriculture, Weights and Measures) and Mr. Dilip Shah (ASQ-MQD, E=mc³ Solutions) distributed SI resources, metrology career publications and discussed weights and measures, metrology and quality career opportunities (Figures 4 and 5). Over 100 requests for NIST SI education resources were received during the 2016 STEP Conference.



Figure 5 (left) – Metrology Careers exhibitors, Lina Ng, Dilip Shah and Elizabeth Gentry at the Science and Technology Education Partnership Conference (STEP 2016).



Figure 6 (right) – LA County metrologist Lina Ng explains local legal measurement science career opportunities (STEP 2016).

Announcement

Announcing the USMA/Blake Family Metric Scholarship Award

The U.S. Metric Association (USMA) has announced a new scholarship opportunity for U.S. high school seniors. The \$2500 USMA/Blake Family Metric Scholarship Award has been established in an effort to help increase International System of Units (SI) awareness and usage in the United States. The scholarship award may be applied to two or four-year undergraduate degree tuition for the 2017-2018 academic year. Students are asked in the application to explain their efforts to promote the SI in the United States (Deadline: March 15, 2017, http://www.us-metric.org/wp-content/uploads/2016/11/USMA_Blake_High_School_Senior_Student_Application.pdf). The U.S. Metric Association (USMA), Inc., is a national non-profit organization that was founded in 1916 and advocates completing the U.S. conversion to the SI (<http://www.us-metric.org/>).

October 2 - 5
Southwestern Assurance Program (SWAP)**
Class No. 5468
Topeka, KS

October 8 - 11
Southern Weights and Measures Association (SWMA) Annual Meeting
Little Rock, AR
Contact: Tim Chesser
E-mail: tim.chesser@aspb.ar.gov

October 10 - 11
Handbook 130, Price Verification
Class No. 5476
Held in conjunction with the SWMA Meeting
Little Rock, AR

October 19 (2 hr)
Webinar - Internal Auditing Best Practices
2:00 p.m. - 4:00 p.m.
Class No. 5423

*State W&M labs only or invitation only.
**Regional Measurement Assurance Program "MEMBERS" (State and Industry RMAP member laboratories.)