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## This Month in History

**March 1, 1781** - The Articles of Confederation was formally ratified making Congress the sole governing body of the new American government. These articles remained in effect until 1789, when the U.S. Constitution was adopted.

**March 1, 1961** - President John F. Kennedy established the Peace Corps.

**March 2, 1793** - Sam Houston (1793 - 1863), born in Rockbridge County, Virginia, was an American soldier, Congressman, and Governor of Texas.

**March 10, 1862** - The U.S. government issued its first paper money in denominations of \$5, \$10, and \$20 bills.

**March 20, 2013** - Spring Arrives at 7:02 a.m. (EDT) in the Northern Hemisphere.

**March 23, 1775** - Patrick Henry gave his famous speech before the Virginia Convention in Richmond with cry of, "I know not what course others may take; but as for me, give me liberty or give me death!"

*Celebrating  
Weights and Measures  
Week  
March 1 - 7, 2013*

## Weights and Measures A Tribute

*Byline: Ivan Hankins (2013)  
Iowa Weights & Measures*

In the course of human history, WEIGHTS and MEASURES has been proven to be an indispensable necessity for life on this planet. From the time you were weighed at birth, to the measure of embalming fluid used before you are buried.

Everyday life "requires" this process to keep our society strong.

The majority of people take for granted that everything we purchase, or use, is accurate and correct.

So who does this? Who are the ones in society that "regulate" this?

You are, the Weights and Measures Inspector.

In the world of Weights and Measures, we few, select individuals are charged with the responsibility of keeping this essential process running.

We come from all walks of life, with the one unified goal, EQUITY.

Equity needed to "maintain a reasonable or accustomed standard of living."

Basically, we are men and women who are dedicated to what is fair.

Our jobs are not only to protect the consumer from an unscrupulous retailer, but to assure that the mega manufacturer isn't selling themselves short.

You are the only individuals who truly possess and understand the complexity

of this process. You are the Weights and Measures Inspector. To you, inspecting is not simply “pump and dump” or “pass or fail”. To you, it is a measure of pride in doing what is right, and what is expected. Plus, you continue to grow by obtaining the necessary knowledge to accomplish your never ending, ever changing, and oft times thankless mission. So to all that have come before, and to all that hold, and will hold the title of WEIGHTS and MEASURES INSPECTOR, I raise my glass (12 oz) and offer up a toast, “to Equity in the marketplace” brought to you by (drum roll please) The Weights and Measures Inspectors across the globe! Hang in there, and I for one, salute you.

*NIST, Office of Weights and Measures would like to thank Ivan for his contribution to Weights and Measures Week and for allowing us to publish his work.*



# U.S. National Work Group on Measuring Systems for Electric Vehicle Fueling and Submetering

In August 2012, the National Institute of Standards and Technology (NIST), Office of Weights and Measures (OWM) formed the U.S. National Work Group on Measuring Systems for Electric Vehicle Fueling and Submetering (USNWG EVF&S) to develop proposed requirements for commercial electricity - measuring devices (including those used in sub-metering electricity at residential and business locations and those used to measure and sell electricity dispensed as a vehicle fuel) and to ensure that the prescribed methodologies and standards facilitate measurements that are traceable to the International System of Units (SI). This work is not intended to address utility metering in the home or business where the metered electricity is consumed by the end purchaser and falls under the authority of entities such as the local utility commission.

On August 29, 2012, the USNWG held its first meeting via web conference. During this meeting, USNWG administrative issues and structure were covered.

In November 2012, OWM prepared and distributed draft proposals for method of sale requirements (for inclusion in NIST Handbook 130, Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality) and a device code (for inclusion in NIST Handbook 44, Specifications, Toler-

## Calendar 2013

*Registration for training in the NIST Office of Weights and Measures is handled by Yvonne Branden at [yvonne.branden@nist.gov](mailto:yvonne.branden@nist.gov).*

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

March 13  
USNWG on Taximeters  
Web-Conference, 1:30 p.m. to 4:00 p.m.  
NIST/Gaithersburg, MD  
Mr. John Barton @ [john.barton@nist.gov](mailto:john.barton@nist.gov)

April 4  
Proficiency Testing Follow-up and Root Cause Analysis  
Webinar, 2:00 p.m. to 4:00 p.m.  
Class No. 5238

April 8 - 11 (4 days)  
SEMAP\*  
Class No. 5209  
Tifton, GA

April 9 - 11 (3 days)  
Packaging and Labeling Seminar  
Class No. 5224  
NIST/Gaithersburg, MD

April 15 - 19 (5 days)  
Fundamentals of Metrology  
Class No. 5208  
NIST/Gaithersburg, MD

April 22 - 26 (5 days)  
Vehicle-Tank and Loading-Rack Meters  
Class No. 5268  
Olympia, WA

April 23 - 25 (3 days)  
Grain Moisture Meter Technical Training  
Class No. 5264  
Kansas City, MO

April 25  
Conducting an Effective Management Review  
Webinar, 2:00 p.m. to 4:00 p.m.  
Class No. 5253

May 2  
Internal Auditing Best Practices  
Webinar, 2:00 p.m. - 4:00 p.m.  
Class No. 5234

May 6 - 10 (5 days)  
WRAP\*  
Class No. 5216 , Helena, MT

May 6 - 9 (4 days)  
Northeast Weights and Measures Association (NEWMA)  
Saratoga Springs, NY  
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ances, and Other Technical Requirements for Weighing and Measuring Devices) to USNWG members.

Based on comments received, OWM prepared updated drafts of these proposals and distributed them at a second USNWG meeting held January 15 - 17, 2013, at NIST in Gaithersburg, Maryland. Of the 39 total attendees, 21 attended in person, while 18 attended online. Attendees included representatives from:

- vehicle charging equipment and electric meter manufacturers,
- state and local weights and measures jurisdictions,
- energy distribution companies and service providers,
- national laboratories,
- technical committees (e.g., the ANSI C12 Chair),
- standards organizations (i.e., UL and NEMA), and
- NIST, OWM and NIST Smart Grid Interoperability Panel.

After reviewing and revising the method of sale proposal during the meeting, the USNWG voted 12 to 1 to recommend to the National Conference on Weights and Measures (NCWM) Laws and Regulation (L&R) Committee that the proposal be presented for voting. The USNWG recognized that some members need to further vet the revised proposal within their organizations, but expects this process to be complete within the next few weeks. Any changes would be forwarded to the L&R Committee in time for inclusion in the NCWM Publication 16. The USNWG will continue its review of the device code at its next meeting, which will be scheduled via web conference in the near future.

During the meeting, a subcommittee to develop methods and equipment needs for field testing electric vehicle (EV) charging devices was also formed.

The USNWG encourages review and input on the draft MOS proposal as well as the draft device code.

Additional information can be obtained from the Technical Advisor, Mr. Marc Buttler, NIST, OWM telephone: (301) 975-4615; e-mail: [marc.buttler@nist.gov](mailto:marc.buttler@nist.gov), or the work group; or the work group Chair, Ms. Juana Williams, NIST, OWM telephone: (301) 975-3989; e-mail: [juana.williams@nist.gov](mailto:juana.williams@nist.gov).

**The Office of Weights and Measures**  
will gladly include your weights and measures related events in  
our calendar.  
Contact the Editor: [Linda.Crown@nist.gov](mailto:Linda.Crown@nist.gov)

Contact: James Cassidy at [jcassidy@cambridgema.gov](mailto:jcassidy@cambridgema.gov)

May 13 - 24 (2 weeks)  
Mass Metrology Seminar  
Class No. 5217  
NIST/Gaithersburg, MD

May 20 - 23  
Central Weights and Measures Association (CWMA)  
Overland Park, KS  
Contact: Maureen Henzler at [maureen.henzler@kda.ks.gov](mailto:maureen.henzler@kda.ks.gov)

June 17  
Webinar Week - NIST IR 6969, SOP 8, Part I  
10:00 a.m. to 12:00 p.m.  
Class No. 5239

June 17  
Webinar Week - Uncertainty Budgets for SOP 4  
2:00 p.m. to 4:00 p.m.  
Class No. 5257

June 18  
Webinar Week - Conducting an Effective Management Review  
10:00 a.m. to 12:00 p.m.  
Class No. 5240

June 18  
Webinar Week - NIST IR 6969, SOP 8, Part II  
2:00 p.m. to 4:00 p.m.  
Class No. 5241

June 19  
Webinar Week - NIST IR 7383, SOP 18, Part I  
10:00 a.m. to 12:00 p.m.  
Class No. 5242

June 19  
Webinar Week - Uncertainty Budgets for SOP 5  
2:00 p.m. to 4:00 p.m.  
Class No. 5258

June 20  
Webinar - Uncertainty Budgets for SOP 19  
10:00 a.m. to 12:00 p.m.  
Class No. 5259

June 20  
Webinar Week - NIST IR 7383, SOP 18, Part II  
2:00 p.m. to 4:00 p.m.  
Class 5243

June 21  
Webinar Week - Calibration Report Evaluation  
10:00 a.m. to 12:00 p.m.  
Class No. 5244

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# NIST LAUNCHES NEW WEBSITE TO EDUCATE INDUSTRY ABOUT ALTERNATIVES TO MERCURY THERMOMETERS

*Byline: Mark Esser, NIST*

As part of a larger effort to reduce the amount of mercury, a potent neurotoxin, in the environment, the National Institute of Standards and Technology (NIST) has launched a [new website](http://www.nist.gov/pml/mercury.cfm) (www.nist.gov/pml/mercury.cfm) to help industry scientists and engineers decide the best temperature measurement alternative for their purposes. The website also includes information about myths pertaining to mercury and temperature measurement and how to safely package and recycle mercury-containing products.

NIST stopped providing calibration services for mercury thermometers on March 1, 2011. This was motivated in part by NIST's work with the Environmental Protection Agency to eliminate as many sources of mercury in the environment as possible.

According to Greg Strouse, leader of NIST's temperature, pressure and vacuum programs, mercury thermometers are neither a superior nor a standard method for measuring temperature.

"We haven't used mercury thermometers as a calibration standard since 1927 when the platinum resistance thermometer standard was adopted," says Strouse. "Our goal with this new website is to show that there is a temperature-sensing technology that will satisfy their needs as well as, or better than, a mercury thermometer, all without the added liability of containing a neurotoxin that is hugely expensive to clean up if released into the environment."

According to NIST researcher Dawn Cross, industrial scientists commonly object to replacing their mercury thermometers because they have grown accustomed to getting the same answer from their mercury thermometers over the years, even if it is less accurate than can be provided by modern digital thermometers.

"Some people who are used to using mercury thermometers think that they define temperature, and this simply isn't true," Cross says. "Graduations on a piece of glass filled with a fluid can never give as accurate a reading as a digital thermometer, based on how the conductivity of metals change as a function of temperature, something we know and can characterize very, very well."

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June 21  
Webinar Week - Uncertainty Budgets for SOP 14  
2:00 p.m. to 4:00 p.m.  
Class No. 5254

July 14 - 18  
NCSL International  
Nashville, TN  
Contact: info@ncsli.org

July 14 - 18  
NCWM Annual Conference  
Louisville, KY  
Contact: info@ncwm.net

August 1  
Webinar - Calibration Report Evaluation  
2:00 p.m. to 4:00 p.m.  
Class No. 5245

August 8  
Webinar - Contract Review  
2:00 p.m. - 4:00 p.m.  
Class No. 5246

August 12 - 16  
Handbook 133, *Checking the Net Contents of Packaged Goods*  
Class No. 5261  
Sacramento, CA

August 15  
Webinar - Document Control and Record-keeping  
2:00 p.m. to 4:00 p.m.  
Class No. 5247

August 19 - 23 (5 days)  
Fundamentals of Metrology  
Class No. 5248  
NIST/Gaithersburg, MD

September 9 - 13  
NEMAP\*  
Class No. 5218  
Harrisburg, PA

September 16 - 20  
MidMAP\*  
Class No. 5219  
Springfield, IL

September 22 - 26  
Western Weights and Measures Association (WWMA)  
Kalispell, MT  
Contact: Doug Deiman at doug.deiman@alaska.gov

September 23 - 27  
SWAP\*  
Class No. 5220  
Phoenix, AZ

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Cross points out that other thermometers based on the principle of thermal expansion of a fluid, such as alcohol, are not hopelessly inaccurate. In fact, they are as accurate as mercury thermometers and are suitable for some applications that don't require stringent temperature control. For example, alcohol thermometers might be suitable for measuring the temperature of gasoline and other fuels, but they would be unsuitable for monitoring the temperature of vaccines, the viability of which relies on strict control of their temperature.

Visit the website at [www.nist.gov/pml/mercury.cfm](http://www.nist.gov/pml/mercury.cfm) for more information about how NIST can help your industry find an accurate, non toxic and environmentally benign alternative to mercury thermometers.

Media Contact: Mark Esser, [mark.esser@nist.gov](mailto:mark.esser@nist.gov), (301) 975-8735

Source: Tech Beat, June 12, 2012

Link to original article: [www.nist.gov/public\\_affairs/tech-beat/index.cfm](http://www.nist.gov/public_affairs/tech-beat/index.cfm)

## WEIGHTS AND MEASURES IN THE NEWS

Nebraska - Omaha.com

**Credit Card Scam at Omaha Gas Pumps**

<http://www.omaha.com/article/20130130/NEWS/701319970>

Wisconsin - Chicago Tribune

**Kraft Cited Again for Short-Weight Products**

<http://www.chicagotribune.com/business/breaking/chi-kraft-cited-again-for-shortweight-products-20130130,0,1659920.story>

New York - pressconnects.com

**Fueling surprise: Study shows when Broome pumps go bad, you usually benefit**

<http://www.pressconnects.com/article/20130119/NEWS01/301190043/Fueling-surprise-Study-shows-when-Broome-pumps-go-bad-you-usually-benefit?odyssey=mod|dnmiss|umbrella|1>

United Kingdom - The Economist

**Mass effect: A better way to clean the world's one true kilogram**

<http://www.economist.com/news/science-and-technology/21569360-better-way-clean-worlds-one-true-kilogram-mass-effect>

October 7 - 9  
Southern Weights and Measures Association (SWMA)  
Charleston, WV  
Contact: Steve Benjamin at [steve.benjamin@ncagr.gov](mailto:steve.benjamin@ncagr.gov)

October 10  
Webinar - State Laboratory Annual Submission Process\*  
2:00 p.m. to 4:00 p.m.  
Class No. 5249

October 21 - November 1 (2 weeks)  
Mass Metrology Seminar  
Class No. 5250  
NIST/Gaithersburg, MD

October 31  
Webinar - Internal Auditing Best Practices  
2:00 p.m. to 4:00 p.m.  
Class No. 5251

November 18 - 22 (5 days)  
Volume Metrology Seminar  
Class No. 5252  
NIST/Gaithersburg, MD

### 2014

January 13 - 17 (5 days)  
Fundamentals of Metrology Seminar  
Class No. not available  
NIST/Gaithersburg, MD

January 19 - 22 (4 days)  
National Conference on Weights and Measures (NCWM) Interim Meeting  
Albuquerque, NM  
[info@ncwm.net](mailto:info@ncwm.net)

February 6  
Webinar - Conducting an Effective Management Review  
2:00 p.m. to 4:00 p.m.  
Class No. 5255

\*Invitation Only

\*\*Limited to State Laboratory Program Participants

Spring is Almost  
Here!

