

**General Session
Proceeding Speeches, Presentations, and Awards**

Denver, Colorado

July 24 – 28, 2016

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Honorary President’s Address “Ensuring a Fair and Open Marketplace: Strategies for Change”

Denver, Colorado
July 26, 2016

Dr. Willie E. May
Under Secretary of Commerce for Standards and Technology
and Director, National Institute of Standards and Technology (NIST)

Thank you for the warm welcome and for allowing me visit with you today:

- Hello Denver! The Mile-High City, Hub for the Rocky Mountain Region.
 - Established in 1858.
 - Key industries include mining, energy, high tech products.
 - Named “Best Place to Live” by *U.S. News & World Report* in 2016
 - Fastest Growing U.S. City in 2015
 - Number one city for business and careers (*Forbes*, 2015)
- NIST was established in 1901 provide scientific and measurements to industry. Congress “fixes the standards of weights and measures” and uses NIST to defines the values and units of measurement. To learn more about NIST’s laboratories, staffing and budget please see the slides “NIST at a Glance,” “Need for Measurement Standards in the United States,” NIST Laboratory Programs,” “NIST Metrology Laboratories,” which are provided below. NIST established the National Conference on Weights and Measures (NCWM) in 1905 and our collaborations over the year have provided the U.S. marketplace with uniformity in both laws, regulations and test procedures.
- Talking about the Future:
 - I will retire in January 2017. The next President of the United States will nominate a new NIST Director following his or her inauguration in January.
 - The Office of Weights and Measures (OWM) will welcome Mr. Doug Olson as its new Chief in February 2017.
 - I want to express my sincere appreciation to Ms. Georgia Harris, Acting Chief of OWM for her outstanding leadership of the office during the “Changing of the Guard” between Ms. Carol Hockett’s retirement earlier this year and Mr. Olson’s arrival early in 2017.
- NIST is one of the leading participants in an international effort to redefine the kilogram so that its mass is more readily reproducible and which moves it from a physical artifact to a natural constant (i.e., relating mass to power using a Watt Balance) NIST researchers are carefully measuring **Planck’s constant** so that it can be the cornerstone of a new and improved International System of Units (The SI). This work is described below in detail in the slides “Redefinition of the Kilogram,” “Basis for the Redefinition of the Kilogram: Two Approaches” and “Redefining the International System of Units,” which includes a photograph of a Watt Balance.
- NIST has become one of the Obama Administration’s key players in technology and innovations. Our scientists are working in advancing cybersecurity in addition to technology and measurements in communications and manufacturing. NIST is also developing advanced materials for manufacturers to use in the future to construct everything from automobiles to airplanes and homes. In addition, NIST’s work has

expanded over the past few years to include research in the fields bioscience, health, climate assessment, disaster resilience, and forensic science.

- NIST/NCWM Collaboration
 - Training
 - NIST trained more than 740 students this year in the subjects ranging from laboratory metrology, inspection and test procedures for weighing and measuring devices, and package control and price verification in retail stores.
 - A Train-the-Trainer event will be hosted at NIST in 2017.
 - A NIST grant for \$100,000 to fund train the trainer events and travel was recently approved.
 - Legal Metrology Standards for alternative powered automobiles:
 - New standards and procedures for testing hydrogen dispensers have been added to NIST Handbook 44. In addition, a new draft code for the meters used to recharge electric cars has been adopted and standards for field testing are under development.
 - A method of sale based on equivalent values for liquefied natural gas has been proposed and debated by the NCWM and now will be considered for adoption at this meeting.
 - A New Handbook for the States
 - NIST has published NIST Handbook 158, “Field Sampling Procedures for Fuel and Motor Oil Quality Testing – A Handbook for Use by Fuel and Oil Quality Regulatory Officials,” for use by the states who conduct regulatory inspections in this area with a goal of increasing uniformity in sample collection.
 - Towards the Future: Responding to New Products and Services
 - NIST is working with several states and the NCWM to develop device requirements and other standards to facilitate the commercialization of recreational marijuana.
 - NIST is working with the NCWM and the GPS/APP based transportation sector to develop appropriate standards and test requirements for this transformational technology.
 - In the future, the retail marketplace will include a wide diversity of “fuels” for transportation and the concept of enabling value comparisons and perhaps sales to be made based on energy content should be considered and would be an area of research that NIST could be called on to assist the NCWM with.
 - Some Future Tools and Expanding Legal Metrology Supervision
 - All levels of government are being challenged to increase productivity while operating with fewer resources. NIST is willing to work with the NCWM and states to develop model programs for greater use of random sampling and risk-based inspections as way to improve inspection efficiency and effectiveness.
 - NIST encourages the states to ensure traceability and equity in the marketplace by expanding their inspection programs to include a wider variety of measuring devices (e.g., scales use at point-of-pack, railroad scales, conveyor scales and moisture meters for grain).

In closing, I want acknowledge my sincere appreciation to each of you and to the NCWM for making the U.S. Weights and Measures System work so well that the public takes accurate weights and measures for granted. Finally, I want you to present a challenge to the NCWM. I am sure you agree that the foundation of all knowledge is accurate data. Both NIST and NCWM needs your help in collecting performance and impact data. Let’s work together to define a methodology for data collection so that with the right data, we can do the analysis needed to truly PROVE the WORTH of your efforts to our communities and economy.

Thank you and goodbye.

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Honorary President’s Address Presentation



President’s Address

“Ensuring a Fair and Open Marketplace: Strategies for Change”

July 26, 2016

Dr. Willie E. May

Under Secretary of Commerce for Standards and Technology
and Director, National Institute of Standards and Technology

National Institute of
Standards and Technology

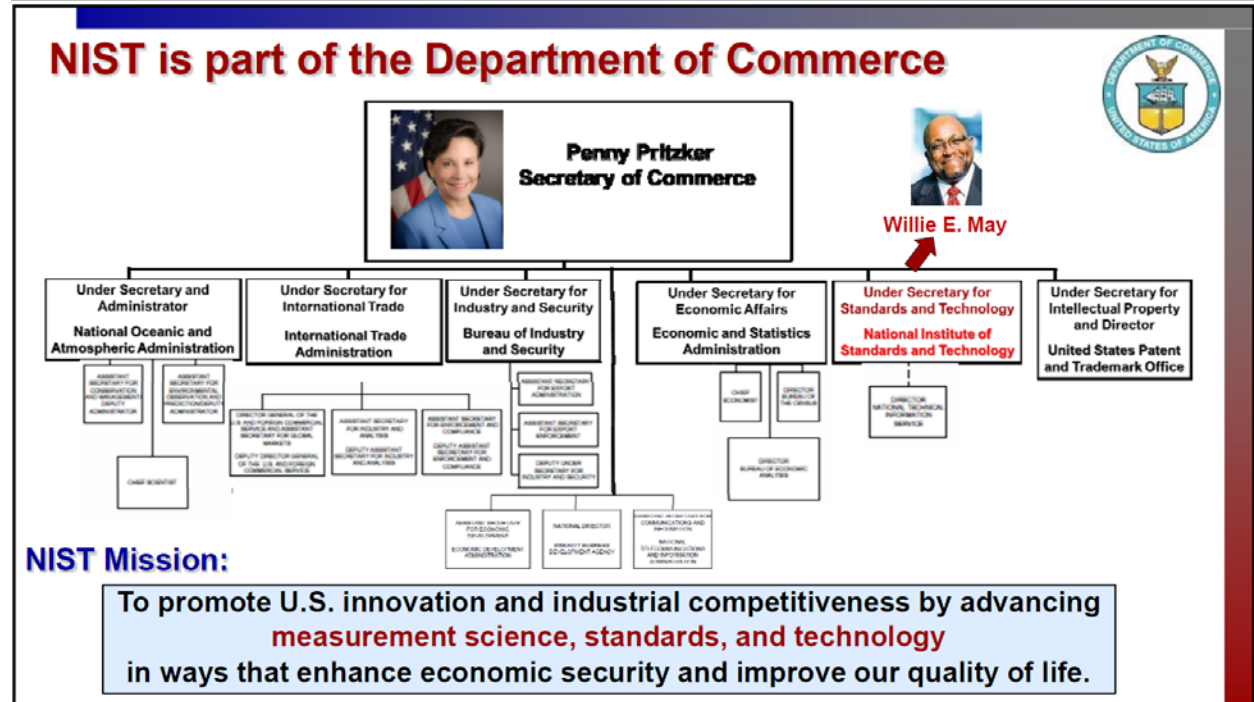
NIST
National Institute of
Standards and Technology

Hello Denver !

**Denver: The Mile High City
Hub for the Rocky
Mountain Region**





- Established in 1858
- Key industries mining, energy, high tech products
- Named Best Place to Live by *U.S. News & World Report* in 2016
- Fastest growing U.S. city in 2015, according to U.S. Census Bureau
- Number 1 city for business and careers, *Forbes*, 2015



NIST At-a-Glance


Major Assets, Partnerships, People, Budget

2 Large Research Campuses



Gaithersburg, MD—62 bldgs. 578 acres
 Boulder, CO—26 bldgs., 208 acres

Partnerships In Every State





60 Manufacturing Extension Centers
 10 joint institutes/Centers of Excellence

FY 2016 Appropriations. \$964 Million

NIST labs, \$690 M
 Industrial Technology Services, \$155 M
 Construction of Research Facilities, \$119 M

People: Employees & Associates



~3,400 Federal Employees
 ~3,700 Guest Researchers & other NIST Associates
 ~ 900 foreign Guest Scientists
 ~400 NIST Staff on ~ 1,000 standards committees

Additional Resources

~ \$120 M from other government agencies
 ~ \$50 M from reimbursable services

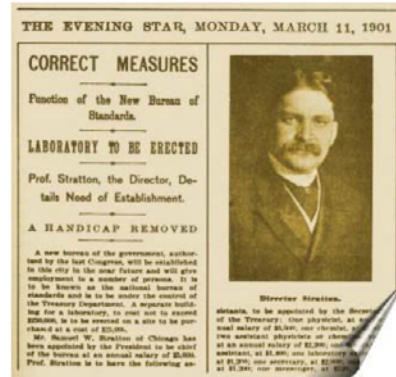
NIST (NBS) established in 1901

“It is therefore the unanimous opinion of your committee that no more essential aid could be given to

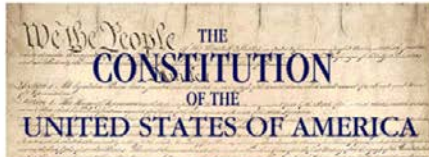
- manufacturing
- commerce
- the makers of scientific apparatus
- the scientific work of Government
- schools, colleges, and universities

than by the establishment of the institution proposed in this bill.”

*House Committee on Coinage,
Weights and Measures ...
May 3, 1900
on the establishment of the
National Bureau of Standards (now NIST)*



Need for Measurement Standards in the U.S.



Article I, Section 8: The Congress shall have the power to...*fix the standard of weights and measures*

National Bureau of Standards established by Congress in 1901

- Electrical industry needed standards
- American instruments sent abroad for calibration
- Consumer products and construction materials uneven in quality and unreliable
- Eight different “authoritative” values for the gallon
- 50% of scales, 20% of weights, 50% of dry measures, and 25% of liquid measures were in significant error in favor of the shopkeepers.



Currently, it is estimated that 80% of global merchandise trade is influenced by testing and other measurement-related requirements of regulations and standards

NIST and NCWM go Way Back!!!!

NIST in 1901

Division I

- Heat & Thermometry
- **Weights and Measures**
- Light and Optical Instruments
- Engineering Instruments
- Shops

Division II

- Electricity**
- Resistance and EMF
- Magnetism and Current
- Inductance and Capacity
- Electrical Measurement Instr.
- Photometry
- Engineering Plant

THE EVENING STAR, MONDAY, MARCH 11, 1901

CORRECT MEASURES

Function of the New Bureau of Standards

LABORATORY TO BE ERECTED

Prof. Stratton, the Director, Details Need of Establishment.

A HANDICAP REMOVED

A new bureau of the government, authorized by the last Congress, will be established in this city in the near future and will give employment to a number of persons. It is to be known as the national bureau of standards and is to be under the control of the Treasury Department. A separate building for a laboratory, to cost not to exceed \$250,000, is to be erected on a site to be purchased at a cost of \$25,000.

Mr. Richard W. Stratton of Chicago has

Division III

Chemistry

"This section was increasingly involved in its investigation of properties for the Government testing program and produced standard samples of alloys, steels, iron ores, copper slags, cements, and lubricating oil."

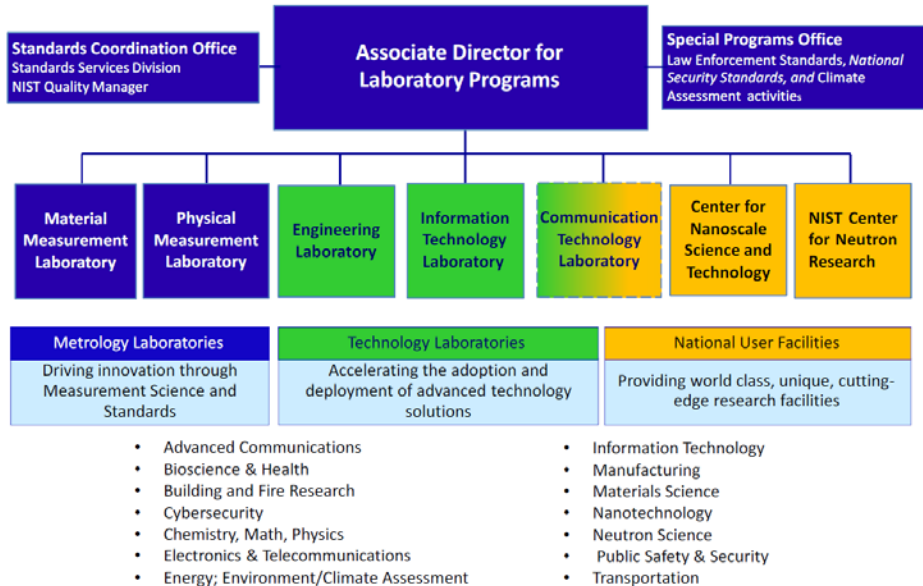
13 staff



White House Reception for the
 21st National
 Conference of Weights
 and Measures,
 May 25, 1928

NIST Laboratory Program

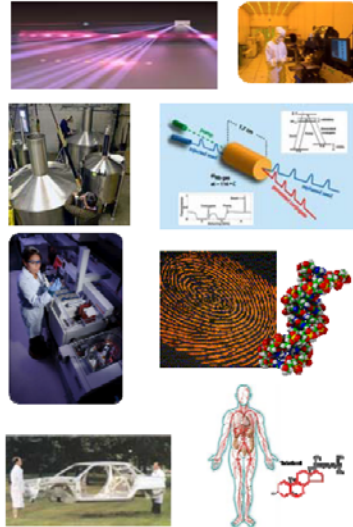
- providing measurement solutions for industry and the nation



NIST Metrology Laboratories

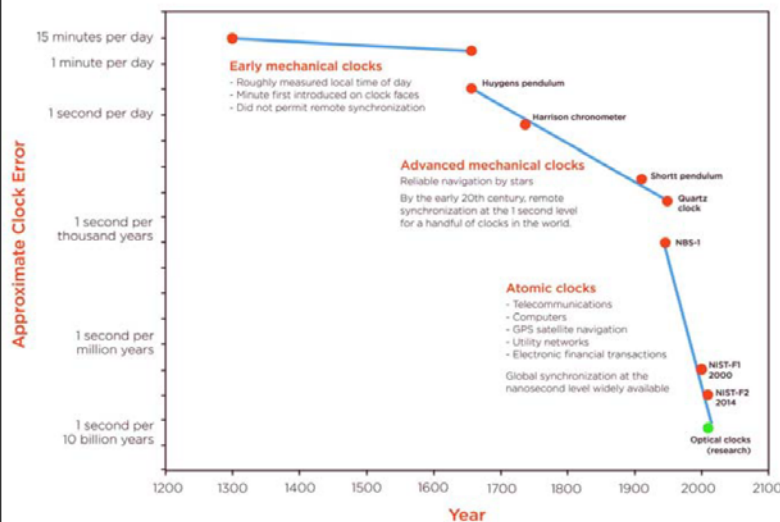
Responsible for advancing the state-of-the-art for measurement science and the dissemination of this metrology into industry, other government agencies, and academia.

- The Material Measurement Laboratory (MML)** serves as the national reference laboratory for measurements in the chemical, biological, and material sciences through activities ranging from fundamental and applied research, to the development and dissemination of certified reference materials, critically evaluated data, and other programs/tools to assure the quality of measurement results.
- The Physical Measurement Laboratory (PML)** develops and disseminates the national standards of length, mass, force and shock, acceleration, time and frequency, electricity, temperature, humidity, pressure and vacuum, liquid and gas flow, and acoustic, ultrasonic, and ionizing radiation through activities ranging from fundamental measurement research to provision of measurement services, including calibration services, standards, and data.



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Leading the world in the realization of international system of units



TIME

Record-setting Atomic Clock

NIST/JILA's strontium lattice atomic clock,
accurate to:
1 second in 15 billion years

Why this level of Precision Matters:

Electric power grid requires:

synchronization to about 1 millionth of a second per day

Modern telecommunications and computer network systems require:

synchronization to about 1 millionth of a second per day

GPS system requires:

synchronization to about 1 billionth of a second per day.

NIST official time is used to time-stamp hundreds of billions of dollars in U.S. financial transactions each working day.

NIST (NBS) established in 1901 Organic Act of 1901; Updated in 2008

Functions and activities of the Institute include:

- custody and dissemination of national standards
 - comparison of US national standards with those of other nations
- determination of physical constants and the properties of materials,
- solutions to measurement and standards problems of other government agencies
- providing (Innovation) assistance to industry



House Committee on Coinage, Weights and Measures ...on the establishment of the National Bureau of Standards (now NIST) May 3, 1900

Unit	Reference value used to define the unit		
	in current SI	In the new SI	
second, s	$\Delta\nu(^{133}\text{Cs})_{\text{hy}}$	$\Delta\nu(^{133}\text{Cs})_{\text{hy}}$	Cs hyperfine splitting
metre, m	c	c	speed of light in vacuum
kilogram, kg	$m(\text{K})$	h	Planck constant
ampere, A	e	e	elementary charge
kelvin, K	T_{FPW}	k	Boltzmann constant
mole, mol	$M(^{12}\text{C})$	N_A	Avogadro constant
candela, source	K_{cd}	K_{cd}	luminous efficacy of a 540 THz

NMI's around the world are working together to link our measurement system to fundamental constants of nature

Redefinition of the kilogram

Currently:

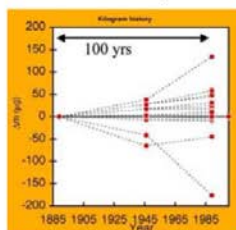
"The kilogram is the unit of mass: it is equal to the mass of the international prototype of the kilogram." 3rd CGPM, 1901



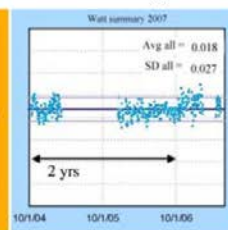
However:

New York Times
 (27 May 2003)
Scientists Struggling to Make the Kilogram Right Again
 ...The kilogram is getting lighter, scientists say, sowing potential confusion over a range of scientific endeavor...

Scatter in IPK copies



Scatter of E-kilogram efforts



Same vertical scale!

Int. Gen. Com Weights and Measures has recommended its redefinition.

Basis for the Redefinition of the Kilogram: Two approaches

- **Physics** – by relating mass to power using a Watt Balance

Planck's Constant (h)

- **Chemistry** – as a fixed

number of atoms Avogadro's

$$1 \text{ kg} = 10^3 \cdot \{N_A\} \cdot m_u$$

(where $m_u = 1/12 \cdot m(^{12}\text{C})$

Redefining the international system of units



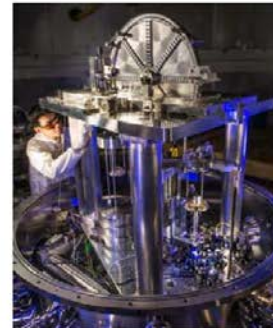
Physical kilogram artifact (1889)

MASS



Redefining mass from a physical artifact to a constant of nature by 2018.

Working with other national metrology institutes around the world, NIST researchers are carefully measuring **Planck's constant** so that it can be the cornerstone of a new, improved International System of Units.



Int. Avogadro Project

In addition to maintaining the more traditional National Physical Measurement Standards, **we also focus a significant portion of our research and measurement services activities on addressing contemporary societal needs**



NIST has become:

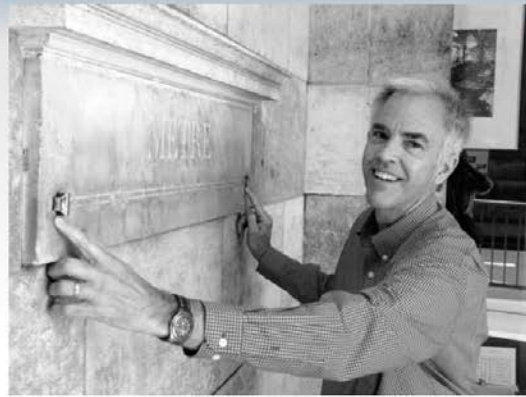
- a key player on the Administration's Innovation Team
- the nation's go-to agency for measurements, standards, and technology



Changing of the Guard



Carol Hockert



Doug Olson

What Have We Done for You Lately?

Trained more than 740 students

- Lab metrology
- Weighing and measuring devices
- Package control



Train the trainer boot camp

- Spring 2017



Grant to NCWM--\$100,000

- Travel
- Training

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What Have We Done for You Lately? (contd.)

Test procedures for hydrogen dispensers

- Incorporated into Handbook 44

Electric Vehicles Refueling Devices

- Adopted draft code, July 2016
- Finalizing standards for field testing electric vehicle fueling stations



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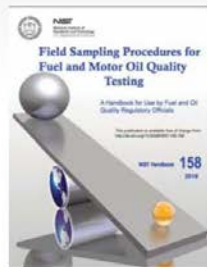
What Have We Done for You Lately? (contd.)

Liquefied Natural Gas

- Sale by mass or unit equivalencies

Petroleum fuels and motor oil

- Handbook 158, April 2016



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Responding to New Products and Services



Legalized Sale of Marijuana in some States

- Need suitable measuring equipment
- Agreed requirements
- New inspection approaches
- Education of businesses

Mobile-app-based Transportation Services

- Measurement challenges for phone GPS
- Appropriate standards for these services

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Where Do We Want to Be Tomorrow?

Accomplishing more with less

Possible approaches:

- Random sampling for some inspections
- More checks on food processing packaging
- Inspections of railroad conveyor scales for coal or moisture meters for grain
- Sales by energy content of fuels
- Risk-based inspections based on past compliance



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Lack of recognition is a good thing!

The weights and measures system in the U.S. works so well that its accuracy is taken for granted.



It's not always pleasant, but it's fair -- Thanks to your efforts.

A challenge to you

The foundation of all knowledge is accurate data.

- NIST and NCWM need your help to collect performance and impact data.
- We need you to be our boots on the ground.
- Let’s work together to define a methodology for data collection.
- With the right data, we can do the analysis needed to truly PROVE the WORTH of your efforts to our communities and economy.



Looking Ahead

NIST and NCWM

- More than 100 years of productive collaboration
- Achieving equity in the marketplace for buyers and sellers
- Looking forward to continuing this mutually beneficial relationship!



Thank You for Your Attention

Questions / Discussion ?



Gaithersburg, MD
62 buildings; 578 acres



Boulder, CO
26 buildings; 208 acres

National Institute of
Standards and Technology

NIST
National Institute of
Standards and Technology

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National Conference on Weights and Measures Chairman’s Address

Denver, Colorado

July 26, 2016

Jerry Buendel

Department of Agriculture, Washington

It’s my pleasure to welcome everyone to Denver and the 101st Annual Meeting of the National Conference on Weights and Measures (NCWM). We continue to have excellent attendance with 240 attendees. This includes 39 state representatives, our Canadian partners, two officials from Curacao, and one from American Samoa.

I want to thank our distinguished guests, Dr. Willie May, Director of the National Institute of Standards and Technology (NIST). We appreciate NIST’s continuing commitment to NCWM. NIST’s mission of accelerating innovation and bringing world class technology to the marketplace highlights our need as a standard setting organization to move forward quickly with regulations to protect consumers and assure fair competition in the marketplace.

Thanks to Dr. Donna Lynne, Colorado’s Lieutenant Governor. We are grateful for her time and support of the important work we do here. Thanks also for the administration’s support of Colorado’s measurement standards programs – the good work they do provides leadership on topics such as Compressed Natural Gas (CNG) and significantly influences national approaches to these emerging areas. Mr. Mahesh Albuquerque and his staff make valuable contributions to this Conference and our regional Conference. Mr. Nick Brecham has helped my home state, Washington, with regulating scales used for recreational marijuana sales.

In looking at some facts on Denver, I found that Denver lays claim to the invention of the cheeseburger. The trademark for the name Cheeseburger was awarded to Denver businessman Mr. Louis Ballast in 1935.

Last year, I chose the theme of “NCWM-Strengthening a Progressive Organization” and set three ambitious goals for this year. I want to report to you on the progress we made in meeting the goals.

The first goal was to develop basic competency exams that can be used by jurisdictions to certify service technicians and to assure newly hired regulatory staff are progressing in their training and are competent to begin their regulatory duties. The Professional Development Committee has risen to the challenge and has made excellent progress towards this goal. They will be contacting the state directors and conducting a survey to see that they are on target with their efforts – thank you the Professional Development Committee (PDC) for keeping your customers first. I’ve talked to some registered service agents and heard they would welcome the chance to take a test once and use those test results to license in multiple states. I ask that each of you, both regulators and industry officials, to put these tests to work and continue to participate in training and testing that improve staff and the services they deliver.

A second goal was to continue our progress in telling our story. The Tool Kit Work Group has produced another video on scales and is near completion of videos on retail fuel station inspections and motor fuel quality. These short, concise videos tell our story in a concise and engaging way and can be used for a variety of audiences. The videos will be available on the NCWM website. I encourage you to take a look and put them to work. Thank you to Mr. Stephen Benjamin for producing the videos and the Associate Membership Committee (AMC) for your financial support.

My third, a priority goal, was to begin a systematic effort of improving our standards development process. Our current processes work, but we need to look at ways to develop standards that we can quickly and responsibly respond to an ever-changing marketplace, adapt to new technology and meet the needs of industry while safeguarding the interests of consumers. A charter team led by Mr. John Gaccione completed the first phase of that effort by delivering

a report on the current condition of our standard setting process. You heard Dr. Matt Curran present a report on that topic and the eight recommendations of the Committee. The Board plans to continue the effort into next year and will formulate a charter to move us forward in this improvement effort. You’ll hear from Chair Elect Kristin Macey on her plans to continue that effort.

As you know, the Board is charged with overseeing the operation and administration of the Conference. We are growing on a number of fronts, and I’m pleased to report to you that we have a Board made up of talented, dedicated members, which are up to the challenge. I want to express my gratitude to them for their thoughtfulness and professionalism.

So, what are the challenges and accomplishments?

One of them is simply dealing with the number of issues we’re handling. Because of the growth, we’ll be revising our item numbering system.

We are on a regular cycle of updating policies, and we’ve made some changes this year. One of those policies clarified the roles and operations of subcommittees and workgroups that support the work of the standing committees. We’ve also made some changes to our meeting policies to provide for a student registration category – this year we have two young ladies in that category, Ms. Katlyn Kunselman and Ms. Holly Butcher – please stand and be recognized.

At this meeting the board approved the posting of job recruitments on the NCWM website. Members will be allowed to post job opportunities and everyone will have access to the postings.

We’ve published three new professional certification exams – large capacity scales, medium capacity scales, and vehicle-tank meters. Thank you again PDC for your efforts.

One of the most visible accomplishments is electronic voting – the new method will make our meetings more efficient and eliminate any counting mistakes.

I want to thank Ms. Carol Hockert for service and friendship and more importantly her leadership in strengthening the national measurement system. She has repaired the NCWM, NIST relationship and the training and workshops have been invaluable. She’ll be missed.

Thanks too to the NIST technical advisors that we rely upon for the expertise and training they provide.

I know there’s much more to come through our joint efforts. I’d like to welcome Dr. Doug Olson to the Conference. We look forward to continuing our work together in serving the consumers and businesses in our great nation. Doug will be visiting the regional conferences and states over the next year to learn more about our labs, regulatory programs, and the standards setting process.

Part of being Chairman is participating in the regional meetings. At each of the regions, I was impressed with the commitment and dedication to developing proposals and to improving our skills. I started the circuit in September of last year with my home region, the Western Weights and Measures Association (WWMA). We met in Boise, Idaho, where Mr. Kevin Merritt and his staff hosted us, and I had the privilege of serving as President. The next stop was Biloxi, Mississippi, where Mr. Gene Robertson put together a great conference and showed us the finest traditional southern hospitality. This year Northeastern Weights and Measures Association (NEWMA) and the Central Weights and Measures Association (CWMA) were back to back. NEWMA was held in Portland, Maine, where Mr. Marc Paquette of Vermont served as Chairman and treated us to some great Maine lobster. Ms. Lori Jacobson chaired the Central meeting. It was held in Rapid City, South Dakota, in the shadow of Mount Rushmore and the beautiful Black Hills. In addition to the conference, a NIST Retail Motor Fuel Dispenser class was held. It included attendees from three regions and was taught by Ms. Tina Butcher and three of our NIST Trained the Trainers.

All the conferences featured a NIST led management seminar on program evaluation. The seminar gave us some tools to take home and improve our programs. The Scale Manufacturers Association (SMA) roundtable stimulated some discussion on how we license and regulate service companies.

I also want to recognize and thank the NCWM staff for their dedication and hard work. Don (Onwiler), Elisa (Stritt), Tyler (Reeder), Jim (Truex), and Darrell (Flocken) keep us pointed in the right direction and do so much more than making these Conferences a success – I can always count on straight answers and quick reliable service.

Ms. Kristin Macey, Chair Elect, thank you for the help and insights you have given me throughout the year. You have helped me think through things and anticipate the needs of our organization. I can tell you that you have a strong, capable leader and a bright future ahead.

I challenge each of you to participate and contribute in some form or fashion. You'll find it to be an excellent growth opportunity as well as a fulfilling and satisfying experience.

So, we're off and running into the next 100 years. Again, thank you everyone for attending and participating and thank you for making NCWM a strong, successful organization. It has been a privilege and a pleasure to serve as your Chairman.

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National Conference on Weights and Measures Chairman Elect’s Address

**Denver, Colorado
July 28, 2016**

**Kristin Macey
Director, Division of Measurement Standards
Department of Food and Agriculture, California**

I am honored to be standing here before you as the new chairman of the National Conference on Weights and Measures (NCWM). Some of you may be aware that I began my weights and measures career as an inspector for the Colorado Department of Agriculture with a territory that spanned from the Continental Divide through Colorado Springs and all the way out to the Kansas border. I was promoted to Director of Colorado’s Weights and Measures Programs in 2002 until being whisked away to California in 2007. Today, I stand before you as California’s State Director of Weights and Measures, so, I guess my first “thank you” is to the Nominating Committee for making the timing of this acceptance speech in my old home town, and home state, very special for me.

Since I started in our business, there have been many changes to the words we use today. Uber was a foreign word that meant really super; a skimming device was a strainer one used to keep the soup clear during cooking; friend was a noun, not a verb; Tweet was the sound made by a bird; and a weed was something bad you sprayed with herbicide. Some of the traditional words we used then are rarely used today: pivots and bearings; steelyards; and analog indications. However, some words and phrases in our vocabulary never seem to go away. Automatic temperature compensation and moisture loss allowance still mean the same, and they are still active topics even after 100 years of discussion at the National Conference on Weights and Measures. So, who knows – while specific words like Uber and credit card skimmers might fade away, we can rest assured that the general requirements and fundamental considerations in our handbooks that provide consumer protection and equity will be as commonplace one hundred years into the future!

This Conference is steeped in tradition, yet inevitably influenced by new ideas and technology. That is why my theme for this year is “Tradition and Technology: Finding the Right Balance.” Just as weights and measures affects nearly every aspect of our daily lives, so does technology. Most Americans can’t imagine a life that does not include a smartphone or computer. Technology has revolutionized the ways companies conduct business and develop competitive advantages in the marketplace. Some of these technology breakthroughs demand our immediate attention. Technology that catches on doesn’t wait for us to do a careful analysis. Sometimes it creates de facto standards faster than we can codify them in the NIST handbooks.

Our standing committees are being strained by an ever-growing number of agenda items for review. Our traditional “recipe” for adopting standards, which has worked so well for decades, suddenly seems sluggish. If our job is to set measurement standards that will address current marketplace needs, we must become more responsive and agile in our process. It’s time for the Conference to re-examine the way we do business. I applaud Mr. Jerry Buendel for creating a Charter Team this past year to examine our standards setting process, and Mr. John Gaccione for taking on the role as team leader. I believe this introspection is important to the Conference for if we do nothing, there is real potential to denigrate the Conference’s reputation as a standard setting organization.

One thing I am very cognizant of is the need for a thoughtful, deliberative process. That’s why I’m going to ask the Charter Team to slow down a bit this next year before jumping to solutions. Our very own Mr. Darrell Flocken is trained in process analysis; he is a black belt in Lean Six Sigma. The Board of Directors and I will explore using him or another trained expert to conduct an orderly review of the problem areas identified before rushing to any next steps. A little more time to do the right thing won’t hurt us. Look at what happened yesterday. We rolled out electronic voting 30 years after it was first discussed at the Conference!

General – 2016 Final Report
Chairman Elect’s Address

In addition to the Charter Team exercise, my other major goal for this year is to cement a solid relationship between the Conference and the Office of Weights and Measures (OWM) within the National Institute of Standards and Technology. The Conference has a golden opportunity when the new chief, Dr. Doug Olson, begins his duties in February 2017. Mr. Don Onwiler, the Board of Directors, and I will be educating the chief about our organization. We will point to our tradition and the trusted relationship we had with Ms. Carol Hockert. As you heard from Dr. Willie May this week, Dr. Olson plans to attend regional conferences and other events, so please make him welcome and help lead him to the broad network of stakeholders who will be critical to his education and success. It is my hope that we can inspire the new chief to continue and maybe even increase the level of services that NIST provides in the course of its mission to promote uniformity in U.S. weights and measures.

The National Conference on Weights and Measures’ National Type Evaluation Program (NTEP) embraces new technology by approving new device types for commerce. Its job is not to squash innovation, but to ensure that the new technology will work as advertised and be suitable for commerce. With the expansion of zero emission vehicles across the United States, I hope that this next year will see applications for NTEP to evaluate hydrogen fuel dispensers and electric charging stations. This is exactly why we have a provision for tentative codes in NIST Handbook 44 (“Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices”).

My last major goal for this year is to stay the course for the good work the Professional Development Committee (PDC) is doing with professional certification exams for industry members and weights and measures officials. In addition to the training facilitated by the NIST training grants, these certifications will be our legacy to the next generation of weights and measures professionals. Over the last couple of years, the PDC has risen to the challenge and developed a model field training program and exams suitable for different levels of competency. I look forward to the development of the basic competency examinations, and thank Mr. Ross Andersen (NCWM Certification Coordinator) for his efforts, guidance, and consistent approach to this process.

In closing, let me say that the National Conference on Weights and Measures has both a rich tradition and a bright future, and we can look with pride and confidence in both directions. All members have a vested interest in ensuring that the Conference continues as a recognized leader for its integrity and creativity in the standards setting process. I hope you stay actively engaged as we move forward. I thank you for the trust you have placed in me and look forward to an exciting year with many new opportunities.

At this time, I would like to make the following appointments:

Specifications and Tolerances (S&T) Committee:

- Josh Nelson, Oregon

Laws and Regulations (L&R) Committee:

- Hal Prince, Florida
- Michelle Wilson, Arizona: to fill the vacancy caused by Ha Dang’s resignation,

Professional Development Committee (PDC):

- Marco Mares, San Diego County, California
- Gene Robertson, Mississippi: to fill the vacancy caused by Doug Killingsworth’s resignation
- Lori Jacobson, South Dakota: to fill the vacancy caused by Julie Quinn’s advancement to the NCWM Board of Directors
- Julie Quinn, Minnesota: to fill the Safety Liaison position

Nominating Committee:

- Jerry Buendel, Washington, as Chair
- John Gaccione, Westchester County, New York

- Stephen Benjamin, North Carolina
- Kurt Floren, Los Angeles County, California
- Joe Gomez, New Mexico
- Charlie Carroll, Massachusetts

Presiding Officers at the 2017 Annual Conference in Pittsburgh, Pennsylvania will be:

- Jack Walsh, Town of Wellesley, Massachusetts
- Marc Paquette, Vermont
- Tim Chesser, Arkansas
- Loren Minnich, Kansas
- The Sergeants-at-Arms at the 2017 Annual Conference will be Pennsylvania officials determined later.

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Roll Call of the States

The Roll Call of the States is taken at the commencement of the Voting Session of the Annual Meeting.

Alabama	Kentucky (X)	Northern Mariana Islands
Alaska	Louisiana	Ohio (X)
American Samoa	Maine (X)	Oklahoma
Arizona (X)	Maryland (X)	Oregon (X)
Arkansas (X)	Massachusetts (X)	Pennsylvania (X)
California (X)	Michigan (X)	Puerto Rico
Colorado (X)	Minnesota (X)	Rhode Island
Connecticut (X)	Mississippi (X)	South Carolina (X)
Delaware	Missouri (X)	South Dakota
District of Columbia (X)	Montana (X)	Tennessee (X)
Florida (X)	Navajo Nation	Texas (X)
Georgia (X)	Nebraska (X)	Utah (X)
Guam	Nevada (X)	Vermont
Hawaii (X)	New Hampshire (X)	Virgin Islands
Idaho (X)	New Jersey (X)	Virginia (X)
Illinois (X)	New Mexico (X)	Washington (X)
Indiana	New York (X)	West Virginia
Iowa (X)	North Carolina (X)	Wisconsin (X)
Kansas (X)	North Dakota	Wyoming

Present (X): 39

Absent: 18

101st NCWM Annual Meeting/Award Recipients

Honor Awards

For 5 Years Attendance

- Sprague Ackley
- Holly Alfano
- Ann Boeckman
- Bill Callaway
- Matthew Curran
- Mark Flint
- Frank Greene
- Steven Harrington
- John Hughes
- Doug Killingsworth
- Tom Palace
- Lance Robertson
- Kevin Upschulte
- Jane Zulkiewicz

For 10 Years Attendance

- Tim Chesser
- Dave Rajala

For 15 Years Attendance

- Loretta Carey
- Constantine Cotsoradis
- Paul Lewis

For 20 Years Attendance

- Rodney Cooper

For 25 Years Attendance

- Tina Butcher
- Christopher Guay

For 35 Years Attendance

- Charles Carroll

Special Recognition Awards

Board of Directors

- Treasurer – Raymond Johnson, New Mexico
- At-Large – Steve Giguere, Maine
- Associate Membership – Christopher Guay, Procter and Gamble, Co.

Laws and Regulations Committee

- Richard Lewis, Georgia

Professional Development Committee

- Angela Godwin, Ventura County, California

Specifications and Tolerances Committee

- Mahesh Albuquerque, Colorado

Presiding Officers

- Tim Chesser, Arkansas
- Steve Harrington, Oregon
- Laurence Nolan, Los Angeles County, California
- Jack Walsh, Town of Wellesley, Massachusetts

Chaplain

- Constantine Cotsoradis, Flint Hills Resources

Parliamentarian

- Lou Straub, Fairbanks Scale, Inc.

Sergeants-at-Arms

- Rich Holcomb, Colorado Division of Oil and Public Safety

- Alberto Villagomez, Colorado Division of Oil and Public Safety
- Scott Wagner, Colorado Division of Oil and Public Safety

Associate Membership Committee

- Bill Callaway, Crompco, as Secretary/Treasurer
- Richard Shipman, Rice Lake Weighing Systems Inc., as Vice-Chair
- David Calix, NCR Corporation, as Chair

Nominating Committee

- Stephen Benjamin, North Carolina
- Charles Carroll, Massachusetts
- Kurt Floren, Los Angeles County, California
- John Gaccione, West Chester County, New York
- Joe Gomez, New Mexico
- Randy Jennings, Tennessee
- Ronald Hayes, Missouri, as Chair

Credentials Committee

- Philip Wright, Texas Department of Agriculture, Texas
- Matt Maiten, Santa Barbara County, California
- Darrell Flocken, NTEP Specialist
- Fran Elson-Houston, Ohio, as Chair

Distinguished Service Awards



Figure 1. Distinguished Service Award to Mr. Mark Coyne, Brockton, Massachusetts

Mr. Mark Coyne of Brockton, Massachusetts (center), receives the Distinguished Service Award from Conference President, Dr. Willie May (NIST, Director [on left]) and Mr. Jerry Buendel, NCWM Chairman (on right).



Figure 2. Distinguished Service Award to Ms. Carol Hockert, NIST, Office of Weights and Measures, Retired.

Mr. Kenneth Bucher, NIST/OWM (center), receiving the Distinguished Service Award on the behalf of Ms. Carol Hockert, Retired Chief, of NIST/OWM. Pictured from left to right: Dr. Willie May, Mr. Kenneth Butcher, and Mr. Jerry Buendel.

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