

**President's Address
National Conference on Weights and Measures
Burlington, Vermont
July 15, 2008**

**Dr. Belinda Collins
NIST, Technology Services Director**

Dr. Belinda Collins addressed the National Conference on Weights and Measures Annual Meeting attendees in Burlington, Vermont, on July 15, 2008. Dr. Collins' gave a presentation based on this year's conference theme "Seeking Balance." She began her presentation with two quotes. The first quote was from George Washington's 1790 State of the Union Address: "Uniformity in currency, weights, and measures of the United States is an object of great importance, and will, I am persuaded, be duly attended to." And, the second quote was from the U.S. Constitution: "...The Congress shall have Power to ... and fix the Standard of Weights and Measures." Both of these quotes are powerful statements. NIST (formerly the National Bureau of Standards) has worked since 1901 to fulfill the mission of the founding fathers to achieve this balance and uniformity in weights and measures.

Dr. Collins elaborated on NIST's contributions to innovative technology and today's mission to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways to enhance economic security and improve our quality of life. The many facets of weights and measures contribute to the success of this mission. You are invited to review the following slide presentation, which was used at the Annual Meeting.

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NIST: Seeking Balance – Address to the National Conference on Weights and Measures

Belinda L. Collins, Ph.D.
Director, Technology
Services

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce



In the Minds of the Founding Fathers

“Uniformity in the currency, weights, and measures of the United States is an object of great importance, and will, I am persuaded, be duly attended to.”

George Washington, State of the Union Address, 1790

... The Congress shall have Power To ...

... and fix the Standard of Weights and Measures;

From the U. S. Constitution

Early NIST: Founded 1901

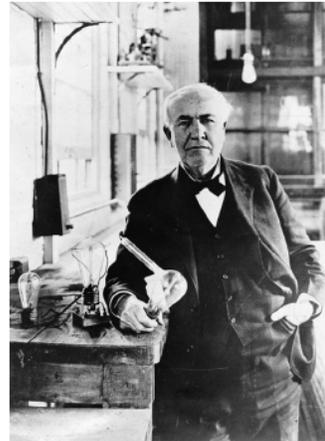
Established by Congress in 1901

Eight different “authoritative” values for the gallon

Nascent electrical industry needed standards

American instruments sent abroad for calibration

Consumer products and construction materials uneven in quality and unreliable



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NIST Today: Mission

To promote U.S. innovation and industrial competitiveness by advancing

measurement science, standards, and technology

in ways that enhance economic security and improve our quality of life



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A Call to Action . . .2008

America COMPETES Act (P.L.110-69)

- A comprehensive strategy to keep America the most innovative nation in the world
- Authorizes American Competitiveness Initiative (ACI)-related programs at NIST, NSF, and DOE
- ACI highlighted in the President's State of the Union address
- First NIST authorization bill enacted in 12 years, the Act authorizes substantial increases in funding for basic research in physical sciences — NIST, DOE, NSF



“The only way we can hope to compete is with brains and ideas that set us above the competition—and that only comes from investments in education and R&D”

Craig Barrett, Chairman, Intel

NIST Infrastructure Paves the Way to Innovation

The equivalent of research “roads and bridges” the industrial and scientific communities need to develop and commercialize new technologies



- Groundbreaking research tools that foster new fields — quantum information, nanotechnology, bioscience
- Better measurement methods to ensure quality
- Performance measures for accurate technology comparisons
- Standards to assure fairness in trade

NIST Responds to Urgent National Needs



Comprehensive World Trade Center Investigation

- Recommended 30 improvements in building standards and practices, many already being put in place by private sector

NIST Initiative for Enabling the Use of Hydrogen as a Fuel

- Develop standards for pipeline safety and reliability
- Ensure accurate fuel measures at point of sale
- Improve efficiency, durability of fuel cells



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NIST Products and Services

Measurement Research

- ~ 2,200 publications per year

Standard Reference Data

- ~ 100 different types
- ~ 6,000 units sold per year
- ~ 130 million data downloads per year



© Robert Raabe

Standard Reference Materials

- ~ 1,300 products available
- ~ 33,000 units sold per year

Calibration Tests

- ~ 16,000 tests per year

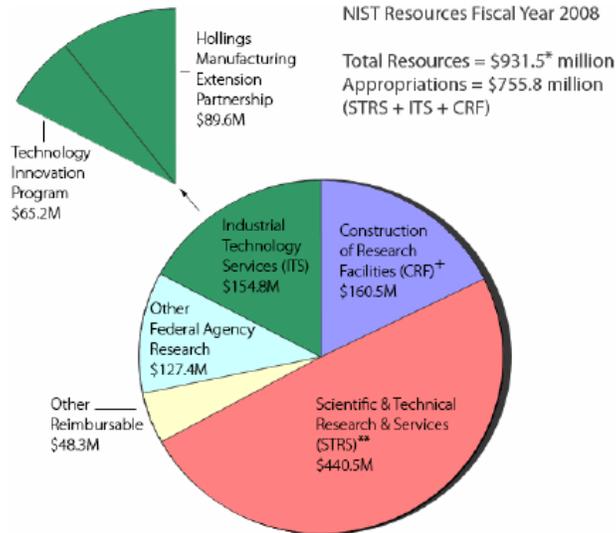
Laboratory Accreditation

- ~ 800 accreditations of testing and calibrations laboratories per year by NVLAP



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NIST 2008 Budget:



* Excludes Working Capital Fund Investments

** Includes \$893,000 in congressionally directed projects

+ Includes \$51.3 million in congressionally directed projects and \$30 million for a new construction grant program

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FY 2009 Budget Request Summary

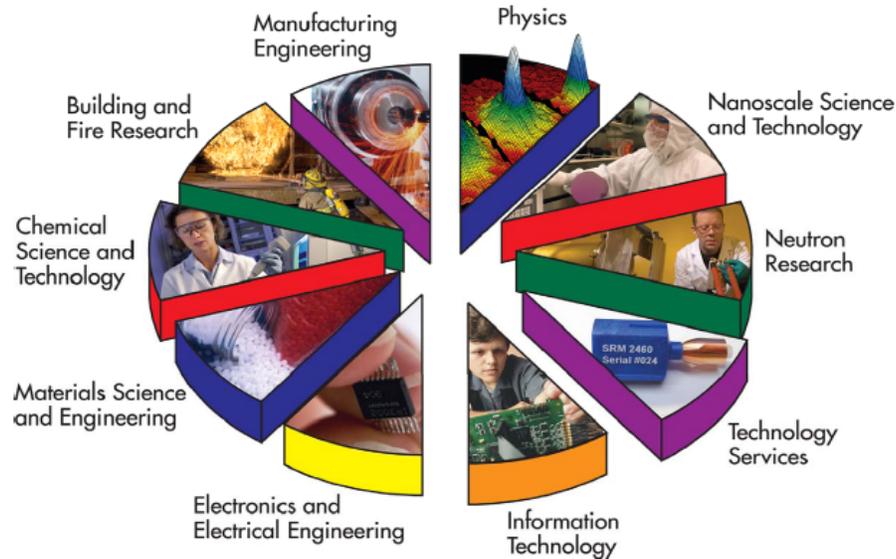
The President and Congress have agreed on a strong innovation plan:

- NIST research and facilities play a critical role in advancing innovation
- Current U.S. safety, security, and quality of life is supported in many ways by past NIST accomplishments
- NIST “roads and bridges” built now enable today’s innovation and tomorrow’s products, services, and economic growth

The Bottom Line:

Investment in NIST research and facilities will help ensure that the U.S. continues to be the world’s economic and innovation leader.

The NIST Laboratories



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Technology Services Provides

- Access to NIST Standard Reference Materials and Data, calibrations, and laboratory accreditation
- Guidance, coordination, information and training on documentary standards and conformity assessment activities
- **Weights and Measures (Legal Metrology) training, technical expertise, guidance, standards development**
- Technology partnerships, including patents, licenses, cooperative agreements, etc.
- Technical information and access to NIST library and publications
- Oversight of the U.S. Measurement System

A Changing Marketplace....to technology for tomorrow



Robotic Dispenser

It is Never a Static Marketplace!



Pricing schemes for gasoline require HB44 changes

Protect consumer and allow innovative marketing



Increasing fuel blends and types (biofuels or additives) mean issues for fuel quality, blending of products, temperature compensation

The Weights and Measures Division

Promotes national and international uniformity in:

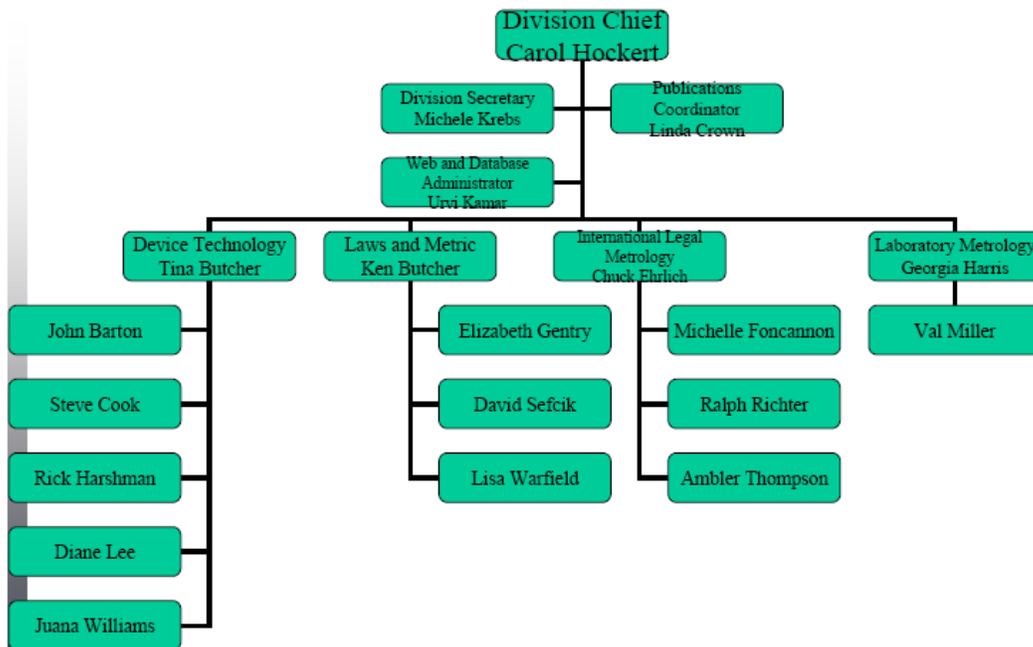
- Laws and regulations
- Weights and measures standards
- Inspection procedures and practices
- Enforcement policies
- Laboratory operation

Enhances consumer protection

Promotes fair competition and equity in the marketplace

Seeks to balance interests of industry, consumers, regulatory officials

Weights and Measures Division



How WMD Accomplishes its Mission

Coordination

- Responses to regulatory issues to promote uniformity and fair trade.

Technical Support to Stakeholders

- Regulatory officials
- Business & industry
- Standards Committees (including NCWM)
- Federal Agencies
- Laboratories
- NTEP

Training

- State and Industry Laboratory Metrology
- Field Officials
- Administrators

Information Dissemination

- Publications and NIST Handbooks and test procedures

Representation

- OIML, APLMF and other international organizations
- ASTM, Industry Associations

Coordination with States, Federal Agencies and Industry

Promote fair competition and equity in the marketplace

Development of standards

Widespread adoption across the country

Seek for a balance of interests between industry, consumers, regulatory officials

Bring groups together to solve problems

Laws and Regulations – Coordination with Other Federal Agencies

Assisting the USDA - Food Safety and Inspection Service with their plans to adopt the 4th Edition - 2005 of NIST HB133.

Assisting the U.S. Department of Commerce Seafood Inspection Program with their plans to adopt key provisions of NIST HB 133 for testing seafood.



Pelletized Ice Cream



Pelletized Ice Cream – Seeking Balance!

- Sold by fluid volume according to FDA
- NIST, FDA, NCWM, W&M officials, industry working together to solve issues regarding measurement of product
 - Determine correct labeling for net content
 - Develop and validate test method
- Compliance will take time
 - Change labels
 - Implement new fill methods

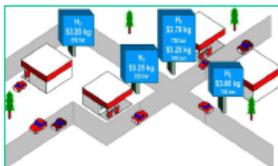
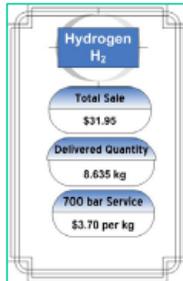


Coordination - Developing Commercial Hydrogen Measurement Standards



Photo courtesy CAPCO

Method of Sale



Fuel Quality

Property	Value	Unit	Limit	Test Method(s)
1	Acetylene	0.1	ppm v/v	Minimum
2	Carbon Dioxide	1	ppm v/v	Minimum
3	Carbon Monoxide	0.2	ppm v/v	Minimum
4	Formaldehyde	0.05	ppm v/v	Minimum
5	Formic Acid	0.2	ppm v/v	Minimum
6	Hydrogen	100	ppm v/v	Minimum
7	Hydrogen Peroxide	10.0	ppm v/v	Minimum
8	Storage and Aging	100	ppm v/v	Minimum
9	Deuterium	1	ppm v/v	Minimum
10	Permissible Concentration	1	ppm v/v	Minimum
11	Water Vapor	10	ppm v/v	Minimum
12	Trace Gases	100	ppm v/v	Minimum
13	Moisture	0.01	ppm v/v	Minimum
14	Trace Hydrocarbons	1	ppm v/v	Minimum
15	Trace Solids	0.001	ppm v/v	Minimum
16	Water	1	ppm v/v	Minimum

Device Standards



Photo courtesy Hydrogencarsnow.com

Test Procedures

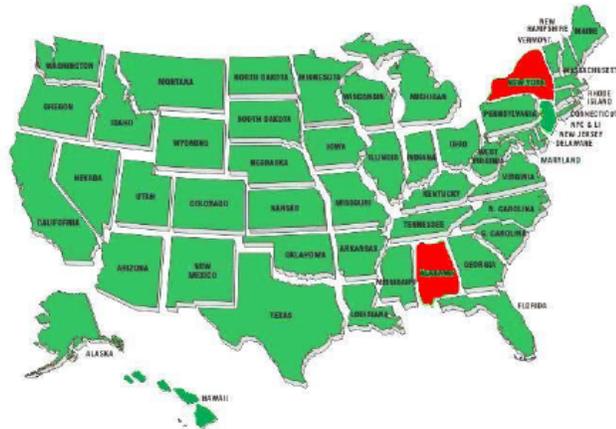




Coordination - Metric Program

Voluntary metric-only labeling

- Since 1994 the FPLA has required both metric and inch-pound units
- 48 States allow metric-only labeling, for products regulated at the state level



Training

Promotes Uniformity in:

- Inspection procedures and practices
- Enforcement policies

Enhances consumer protection

- Traceability
- Accurate measurements

Promotes fair competition and equity in the marketplace

Device Technology – Field Training

Small Volume Prover Training

First time course offered in 2007 - Ohio

Retail Motor Fuel Dispenser Training

Wisconsin W&M Assn – October 2007

Virginia W&M – February 2008

New Hampshire - June 2008 (for 130 service agents)

Carcass Evaluation Systems (with USDA)

Nebraska – February 2008

Small Scales – Instructor Training

NIST Sept 2008

Laws and Metric Training

Price Verification

Maryland – April 2008

Connecticut – May 2008

NIST – September 2008

Checking the Net Contents of Packaged Goods

Instructor Training - Tennessee in September 2007

Technical Support to Stakeholders

Promote fair competition and equity in the marketplace

Promote national and international uniformity

Consistent Application of Standards and Procedures

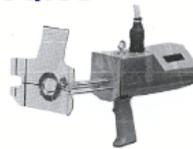
Accurate and Technically Correct Information

Timely Response to New Technologies, Including New Measuring Devices

Metric Acceptance

Answer over 1000 inquiries annually

Technical Support – New Device Technologies



Carcass evaluation

Tentative code adopted in
2006

Multiple Dimension Measuring Devices

Standards available on loan from
NIST/WMD



Weighing in Motion technology

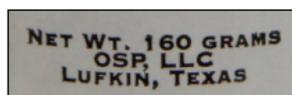
Used for legal actions in other
countries



Technical Support - Facilitating the Use of the Metric System

■ 2008 Market Survey

- Establish baseline Fair Packaging and Labeling Act (FPLA) labeling compliance
- Measure metric-only labeling use in U.S. retail outlets



NIST and NCWM – Working together

Technical Support

Technical Advisors to NCWM committees, sectors
ATC Steering Committee

Publication of Handbooks and other documents

NIST Handbooks 44, 130, 133
Meeting Agendas (Pubs 15 and 16)
Annual report of the Conference

Representation – Seeking Balance

Promote national and international uniformity

Weights and measures standards

Inspection procedures and practices

Promote fair competition and equity in the marketplace

Support for U.S. manufacturers

Maintain a balance of interests between industry, consumers, regulatory officials

Participate in national and international work groups

International Legal Metrology

OIML Mutual Acceptance Arrangement (MAA)

- International program requested by NCWM
- Facilitates acceptance of measuring instrument test data obtained in another country – essential for supporting U.S. instrumentation industry
- Initial instrument categories include:
 - Non-automatic weighing instruments;
 - Load cells; and
 - Water meters

Representation - International Legal Metrology

Publication of the OIML Flow Meter Standard

- OIML R117-1 “Measuring Systems for Liquids other than Water” published in March 2008 with 100% international consensus.
- Multi-year international project with direct participation of US industry and technical experts from 28 nations (US + Germany are co-secretariats.)
- Incorporates several new instrument technologies and covers all types of liquid flow systems.



International Legal Metrology

Development of OIML Standard on Software

- Complexity of commercial device technology instigated need for software subcommittee and sector
- OIML has constituted a software subcommittee.
- Participation by NCWM Software Sector members on US National Working Group for the international effort.
- New OIML draft document “General requirements for software-controlled measuring instruments” is currently being voted upon.



Information Dissemination

Promote national and international uniformity

- Weights and measures standards
- Inspection procedures and practices

Enhance consumer protection

- Respond to requests for information
- Educational Outreach

Promote fair competition and equity in the marketplace

- Handbooks and technical publications

NIST Handbook 44

"Specifications, Tolerances, and Other Technical Requirements for Commercial Weighing and Measuring Devices"

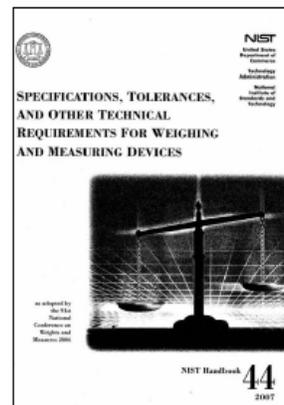
- also applies to law enforcement equipment

A product of the weights & measures community
Published annually by NIST to promote uniformity

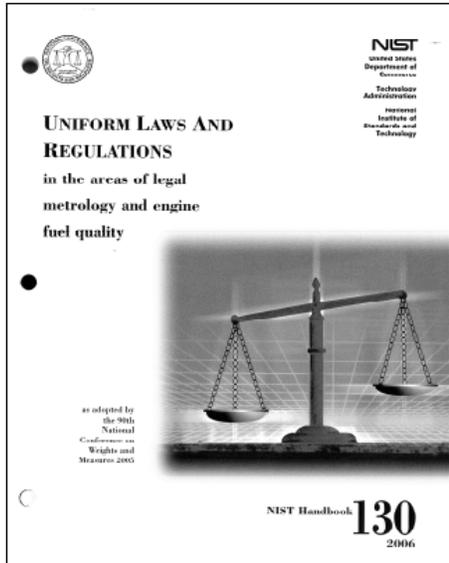
Developed through the NCWM
Adopted by all states

- By reference
- By incorporation

Not all States use the same edition



Handbook 130



“Uniform Laws and Regulations in the areas of legal metrology and engine fuel quality”

Published by NIST to promote uniformity

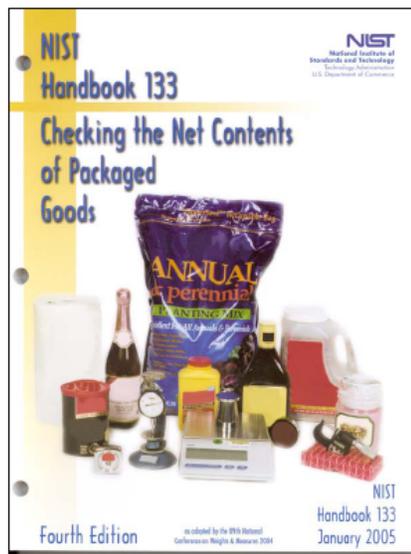
Developed through the NCWM Uniform laws and regulations

- Serve as template or model

Adoption by States:

- Some adopt in entirety
- Some use as guideline
- Some do not use at all

Handbook 133



“Checking the Net Content of Packaged Goods”

Published by NIST to promote uniformity in package inspections

Developed through the NCWM

Adoption by States:

- 44 states or territories adopt in its entirety
- 7 use as guideline
- 2 do not use at all

Other Publications

NIST Handbooks 105 Series

- Specifications for standards used to test commercial devices

NIST Handbook 143 and 145

- Laboratory metrology procedures and standards

NIST Special Publications

- Interpretations
- Guides
- Manuals

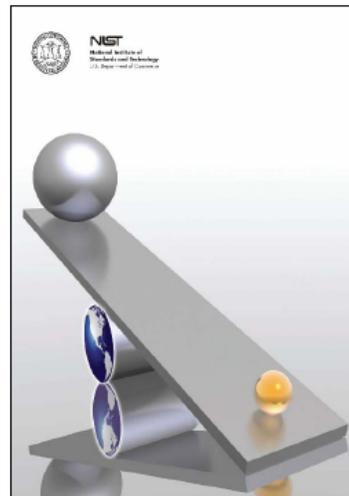
NCWM Publications 15, 16, and Annual Report

The Power of Partnerships – NIST and NCWM

■ Together, addressing topics essential for ensuring equity in commerce

- Changing device technology
- New engine fuels and test methods
- Automatic temperature compensation
- Unique products such as pelletized ice cream
- Hydrogen as a fuel
- Use of metric units as appropriate

■ Together – we seek balance!



Chairman's Address
93rd National Conference on Weights and Measures
Burlington, Vermont
July 15, 2008

Judy Cardin
Wisconsin Department of Agriculture & Consumer Protection

Good Morning Everyone,

Thank you for trusting me to lead the conference during this year of challenging issues and change. We emerged from the challenges a stronger organization, focused on increasing our efficiency and effectiveness.

My theme this year was "Seeking Balance," and our organization did a tremendous job of handling difficult and complex issues with a steady, thoughtful and balanced approach that helped us make the right decisions.

The standing committees are outstanding this year, and I'd like to thank them for their balanced approach, expertise, attention to due process, and hard work.

I would like to recognize our strengthening partnership with NIST, and to thank Carol Hockert, Chief of the NIST Weights and Measures Division, for her dedication to growing our partnership, in addition to the friendship and support she has given me personally. NIST has added talented, positive personnel this year who helped us greatly in achieving our shared goals.

Thank you to Measurement Canada for their commitment the NCWM, and for their continued involvement in improving the implementation of our Mutual Recognition Agreement.

The Board of Directors merits special recognition this year. They worked long hours this year to plan and implement changes in NCWM management structure. Their dedication, cooperation and focus allowed us to accomplish all of our goals.

This year of change is also a very strong year for membership, meeting attendance, and participation. Thanks to all of the membership and meeting attendees for their involvement.

We are welcoming a new Executive Director and NTEP Administrator this year, and changing our structure to allow direct management of the conference. As a result, we are saying a fond goodbye to Beth Palys and Management Solutions Plus. Beth and her staff partnered with us over the last 10 years to help us grow and reach the point where we are ready to self manage.

Now, I'll introduce our new management team, and also honor the contributions that Beth, Steve Patoray, and the rest of Management Solutions' staff made to our organization.

Our new Executive Director is well known and respected in the weight and measures community, Don Onwiler. Don comes to us from the Nebraska Weights and Measures program. He has been active in the NCWM for 11 years, including serving as the NCWM Chairman, NTEP Committee chair for two years, and on the NCWM Board of Directors for six years.

In addition to his weights and measures expertise and strong leadership abilities, he brings to his new role a strong dedication to NCWM, and a passion for our purpose and goals. Don will now say a few words, and recognize Beth Palys' years of service.

Next, it's my pleasure to re-introduce you to another familiar face, Jim Truex our new NTEP Administrator. Jim has been active in the NCWM for 25 years. He comes to us from the Ohio Weights and Measures program, where he was Chief for many years.

Jim has been a strong leader in our conference, serving on the board of directors, and as the NCWM Chairman and as NTEP Committee Chair for three terms. He's been closely involved with NTEP since its inception, including participating in the weighing, measuring and software sector, and overseeing the Ohio NTEP laboratory. Jim will now say a few words, and recognize Steve Patoray's contributions to the NTEP Program.

Please join me in welcoming Don Onwiler and Jim Truex!

I'd like to add my thanks to Beth, Steve, and all of the staff at Management Solutions for the excellent service and partnership we've enjoyed over the last 10 years. Aves Thompson asked that I share his letter of appreciation for Management Solutions with you, and Ross Anderson would also like to make some comments about Beth and her staff.

Thanks to Ross and Aves for their comments.

October 1, 2008, is the transition date for the management change. Don will keep us informed on transition progress, including new phone numbers and important dates for any communication changes. Our goal is a seamless management transfer, and with the excellent cooperation we are receiving from Beth and Steve, and the leadership of Don and Jim, we will successfully achieve that goal.

New Chairman's Address
93rd National Conference on Weights and Measures
Burlington, Vermont
July 15, 2008

Jack Kane
Montana Business Standards Division

Good Morning,

First, I would like to let you all know how honored I am to stand before you as the Chairman of the National Conference on Weights and Measures, and I would like to thank all those that helped to prepare me to take on this role. Without the guidance and advice from many people, some sitting here today, and several who have retired from Weights and Measures or moved on in their careers, it would not be possible for anyone to assimilate the knowledge and background necessary in the short amount of time many of us have while with our respective programs.

As you are all aware, the NCWM is facing several challenges in the near future. We are moving forward in our evolution of becoming a standalone organization with our own employees in charge of our day to day operations. For NTEP and our industry partners, we need to implement an effective verification program to insure that production meets type; and we all need to effectively react to market driven changes to the world we work in and regulate, such as retail price posting and alternative fuels, which are already here.

In conjunction with our partners in industry and at NIST, we have faced similar challenges in the past, and we will deal with these and other issues as they arise. However, in order to rise to these challenges, we need to develop leaders for this conference and the best way is to identify, mentor, and task them with increasingly difficult positions. In other words, we need to help them grow so they will be able to meet these future challenges, which leads into my theme for the coming year "Getting Involved, Making a Difference." At my first weights and measures conference, a regional Western Weights and Measures Association, held in Anchorage, Alaska, back in 1995, I was approached by two of the more involved members in the west – Monty Hopper of Kern County and Gary West from the State of New Mexico. While sitting down at dinner towards the end of the conference, I was asked point blank what my intentions were: was I going "to bail in and get involved helping further the work of the conference," or was I "just going to be a tourist?" As is my nature, I chose bail in. As I became more active in the conference, both at the regional and national level, I looked to the leaders of the national conference, Ron Murdock, Lou Straub, Aves Thompson, and Sid Colbrook, by either asking for or being involuntarily volunteered to various committee work.

What I would like to ask from all of you here is that when you return to your state, actively search out and promote the best and brightest in your local jurisdictions and make them aware of the issues. At your regional meetings, identify and promote those among your group who are active and involved to take on committee assignments in preparation for possible national level participation.

In my travels to the various regional meetings during the last year, I had an opportunity to listen to the folks who came to the microphone to speak and was very impressed with the depth of knowledge. Let's work to get these folks even more involved and help them step up and make the difference. With that said I'd like to make the following appointments.

Specifications and Tolerances (S&T) Committee:

- Ken Ramsburg, Maryland Department of Agriculture.

Laws and Regulations (L&R) Committee:

- Jonelle Brent, Illinois Department of Agriculture, for a five-year term replacing Vicky Dempsey, Montgomery County Weights and Measures, Ohio;
- Terrance McBride, Memphis Weights and Measures, for a two-year term replacing Steven Benjamin, North Carolina Department of Agriculture, who is moving on to the Board of Directors;
- Joe Gomez, New Mexico Department of Agriculture, for a one-year term replacing Roger Macey, California Division of Measurement Standards, who will be retiring this year; and
- Rob Underwood, Petroleum Marketers Association of America, replacing Chris Guay, Procter& Gamble.

To the PDC Committee:

- Julie Quinn, State of Minnesota, Department of Commerce, Weights and Measures Division.

To the Credentials Committee:

- Kim Connor, Barnstable (MA) Weights and Measures.

Presiding Officers:

- Tim Chesser, Arkansas Bureau of Standards;
- Kirk Robinson, Washington Department of Agriculture;
- Jack Walsh, Framingham (MA) Weights and Measures; and
- Ivan Hankins, Iowa Weights and Measures Bureau.

I've also asked for and received confirmation that Lou Straub, Fairbanks Scales, Inc. will continue in his role as Parliamentarian and Steven Langford, Cardinal Scale Manufacturing Company, will continue as our Chaplain for the coming year.

Again, thank you for the privilege of being asked to serve this conference, and travel safe.

NCWM 2008 Annual Meeting Honor Award Recipients

Full Name	Organization	State	No. of Years
Joe Buxton	Daniel Measurement and Control, Inc.	GA	10
James Cassidy, Jr.	Cambridge Weights and Measures	MA	10
Maurice J. Forkert	Tuthill Transfer Systems	IN	10
Alan Johnston	Measurement Canada	Canada	10
Ted Kingsbury	Measurement Canada	Canada	10
L. Edward Luthy	B-Tek Scales, LLC	OH	10
Beth W. Palys, CAE	National Conference on Weights and Measures	MD	10
Darrell E. Flocken	Mettler-Toledo, Inc.	OH	15
Randy Jennings	Tennessee Department of Agriculture	TN	15
Leon Lammers	Avery Weigh-Tronix	MN	15
Neal J. Nover	Nover Englestein and Associates, Inc.	NJ	15
Michael Pinagel	Michigan Department of Agriculture	MI	15

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