

**N C W M
PUBLICATION**

16

**COMMITTEE REPORTS
FOR THE 101ST
ANNUAL MEETING**

Denver, Colorado / July 24-28, 2016

Prepared in Cooperation with the National Conference on Weights and Measures, National Type Evaluation Program, National Institute of Standards and Technology Office of Weights and Measures, Central Weights and Measures Association, Northeastern Weights and Measures Association, Southern Weights and Measures Association and Western Weights and Measures Association



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



National Conference on Weights and Measures Overview

National Conference on Weights and Measures (NCWM), Inc. is a standards development organization for weights and measures regulatory agencies of the states, counties, and cities of the United States, as well as for federal agency use. The Annual Meeting brings together government officials and representatives of business, industry, trade associations, and consumer organizations for the purpose of hearing and discussing subjects that relate to the field of weights and measures technology and administration.

The programs of NCWM and its committees explore the broad area of this economically important segment of governmental regulatory service. NCWM develops and recommends laws and regulations, technical codes for weighing and measuring devices used in commerce, test methods, enforcement procedures, and administrative guidelines for adoption by regulatory agencies in the interest of promoting uniformity of requirements and methods among state and local jurisdictions.

A major objective of NCWM is to foster understanding and cooperation among weights and measures officials and all industrial, business, and consumer interests. NCWM has been cited on numerous occasions for its outstanding success. The National Institute of Standards and Technology (NIST) have statutory responsibility for “cooperation with the states in securing uniformity of weights and measures laws and methods of inspection.” Opinions expressed in submitted documents are those of the authors and not necessarily those of NCWM. Contributors are solely responsible for the content and quality of their material.

Strengthening a Progressive Organization

Jerry Buendel, Chairman
State of Washington



Dear Friends,

Welcome to the 101st Annual Meeting of the National Conference on Weights and Measures and the exciting city of Denver, Colorado!

We are moving forward on our next 100 years of service with the theme, “NCWM – Strengthening a Progressive Organization.” We are stronger because our hardworking members and excellent staff are working to deliver standards, educational materials, certification programs and superb conference support. We’ve made considerable progress in our Professional Certification Program and are close to delivering competency exams for use by service technicians and entry level inspectors. During this conference we’ll vote on a wide range of complex items as well as offer education and training sessions on hot topics. I ask that you make an effort to listen to the report from our standards development team and participate in the discussion during that session. Their work is the first step in a disciplined process of examining our operations, looking for opportunities to improve and, if necessary radically changing the way we develop standards.

Denver, the gateway to the Rockies, is a relatively new city. It started when a group of Georgia prospectors discovered gold at the confluence of Cherry Creek and the South Platte River in the summer of 1858. It wasn’t long before prospectors, fortune-seekers and entrepreneurs rushed into the area looking to strike it rich. With rapid growth came problems and in the spring of 1859 the citizens formed the first city government just a few blocks from our conference site in a saloon called Apollo Hall at what is now 1425 Larimer Street. Denver struggled and the railroads helped to transform Denver from a rough frontier town to the largest most opulent city between Chicago and San Francisco. Since then the city has thrived and serves as a financial center and transportation hub for the Rocky Mountain region. Denver is home to four major sports teams, major museums, and a wide variety of entertainment. I hope you can take some time to enjoy the area.

Please make plans to attend our special event. It will be an outing to Mile High Stadium, home of the Denver Broncos. We’ll have access to the playing field for some fun and games as well as enjoy a casual buffet dinner.

Thank you for your efforts and participation in the important work that we do. I look forward to seeing you and wish you safe travels.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerry Buendel". The signature is fluid and cursive, written in a dark ink on a white background.

Jerry Buendel
NCWM Chairman

Table of Contents

Title of Item	Page
Schedule of Events	iii
Organization Chart	vii
Past Chairmen	xxi
General Information	GEN – 1
Purpose.....	GEN – 1
Welcome Luncheon for New Attendees.....	GEN – 1
Committee Reference Key.....	GEN – 1
Appendices.....	GEN – 1
Designation of Item Status.....	GEN – 2
Addendum Sheets.....	GEN – 2
Voting System.....	GEN – 3
Written Comments or Oral Statements.....	GEN – 3
Participation.....	GEN – 4
Reports.....	GEN – 4
Interim Meeting.....	GEN – 4
Units of Measurement.....	GEN – 4
Board of Directors	BOD – 1
100 Introduction.....	BOD – 1
110 Activity Reports.....	BOD – 4
120 Strategic Planning, Policies, and Bylaws.....	BOD – 10
130 Financials.....	BOD – 27
Appendix A – Item 110-4: Report of the Activities of the International Organization of Legal Metrology (OIML) and Regional Legal Metrology Organizations.....	BOD – A1
Appendix B – Item 110-5: Associate Membership Committee (AMC) Agenda and Draft Meeting Minutes.....	BOD – B1
Laws and Regulations Committee	L&R – 1
200 Introduction.....	L&R – 1
231 NIST Handbook 130 – Uniform Packaging and Labeling Regulation.....	L&R – 5
232 NIST Handbook 130 – Uniform Regulation for the Method of Sale Commodities.....	L&R – 9
237 NIST Handbook 130 – Uniform Engine Fuels and Automotive Lubricants Regulation.....	L&R – 24
260 NIST Handbook 133.....	L&R – 30
270 Other Items – Developing Items.....	L&R – 78
Appendix A – Background/Discussion on Agenda Items of the L&R Committee.....	L&R – A1
Specifications and Tolerances Committee	S&T – 1
300 Introduction.....	S&T– 1
310 Handbook 44 – General Code.....	S&T– 6
320 Scales.....	S&T– 8
322 Automatic Bulk Weighing Systems.....	S&T – 11
325 Weigh-in-Motion Systems Used for Vehicle Enforcement Screening.....	S&T – 15
330 Liquid Measuring Devices.....	S&T – 23
331 Vehicle-Tank Meters.....	S&T – 25
332 LPG and Anhydrous Ammonia Liquid-Measuring Devices.....	S&T – 28
334 Cryogenic Liquid-Measuring.....	S&T – 36
335 Milk Meters.....	S&T – 37
337 Mass Flow Meters.....	S&T – 39
338 Carbon Dioxide Liquid-Measuring Devices.....	S&T – 42
339 Hydrogen Gas-Metering Devices.....	S&T – 44
354 Taximeters.....	S&T – 46

2016 Interim Report Table of Contents

358 Multiple Dimension Measuring Devices	S&T – 54
360 Other Items	S&T – 59
Appendix A – Background/Discussion on Agenda Items of the S&T Committee	S&T – A1
Professional Development Committee	PDC – 1
400 Introduction.....	PDC – 1
410 Education	PDC – 3
420 Program Management.....	PDC –15
National Type Evaluation Program Committee	NTEP – 1
500 Introduction.....	NTEP – 1
510 International.....	NTEP – 3
520 Activity Reports.....	NTEP – 6
530 Conformity Assessment Program	NTEP – 9
Appendix A – Item 520-1: NTEP Statistics Report	NTEP – A1
Appendix B – Item 520-2: Belt-Conveyor Scale Sector Meeting Summary	NTEP – B1
Appendix C – Item 520-2: Grain Analyzer Sector Meeting Summary	NTEP – C1
Appendix D – Item 520-2: Measuring Scale Sector Meeting Summary	NTEP – D1
Appendix E – Item 520-2: Software Scale Sector Meeting Summary.....	NTEP – E1
Appendix F – Item 520-2: Weighing Scale Sector Meeting Summary	NTEP – F1
Appendix G – Item 520-2: Multiple Dimension Measuring Devices Meeting Summary	NTEP – G1
Nominating Committee	NOM – 1
800 Introduction.....	NOM – 1
810 Nominations.....	NOM – 3

Schedule of Events

(The schedule of events is tentative and subject to change.)

**Committee hearings will occur in the order presented. Times of each hearing are not firm; when one committee finishes, the next committee will begin. Committee chairs reserve the right to group items and select their sequence for presentation on voting. Registrants should plan to attend an entire Voting Session to ensure their presence when items of interest are likely to be under consideration.*

Saturday, July 23, 2016		
8:30 a.m. – 5:00 p.m.	NCWM Board of Directors Meeting	Mt. Sopris A
Sunday, July 24, 2016		
7:30 a.m. – 9:00 a.m.	Coffee Service	Colorado Foyer
7:30 a.m. – 5:00 p.m.	Registration and Exhibits	Colorado Foyer
8:00 a.m. – 11:30 a.m.	Meter Manufacturers Association	Maroon Peak
9:00 a.m. – 11:30 a.m.	Board of Directors	Mt. Sopris A
9:00 a.m. – 11:30 a.m.	Moisture Loss Task Group	Mt. Princeton
9:00 a.m. – 11:30 a.m.	Multi-Point Calibration Task Group	Mt. Oxford
9:00 a.m. – 11:30 a.m.	Weigh-in-Motion Task Group	Mt. Harvard
11:30 a.m. – 12:45 p.m.	New Attendees Lunch <i>(By invitation only)</i>	
1:00 p.m. – 3:30 p.m.	Packaging and Labeling Subcommittee	Mt. Princeton
1:00 p.m. – 3:30 p.m.	Promotional Tool Kit Task Group	Mt. Oxford
1:00 p.m. – 3:30 p.m.	Fuels and Lubricants Subcommittee	Mt. Harvard
3:30 p.m. – 4:00 p.m.	Joint Committee Meeting	Colorado Ballroom
4:00 p.m. – 5:00 p.m.	Agenda Review	
	Specifications and Tolerances Committee	Mt. Princeton
	Laws and Regulations Committee	Mt. Oxford
	Professional Development Committee	Mt. Harvard
	NTEP Committee	Mt. Sopris A
	Board of Directors	Mt. Sopris A
5:30 p.m. – 7:00 p.m.	Chairman's Reception	Capitol Peak Room

Schedule of Events

Monday, July 25, 2016

7:00 a.m. – 9:00 a.m.	Light Breakfast	Colorado Foyer
7:00 a.m. – 5:00 p.m.	Registration and Exhibits	Colorado Foyer
8:30 a.m. – 5:00 p.m.	Official Session – Open Hearings Presiding Officer Mr. Jack Walsh, Town of Wellesley, Massachusetts Specifications and Tolerances Committee Laws and Regulations Committee Professional Development Committee NTEP Committee Board of Directors	Colorado Ballroom
12:00 p.m. – 1:30 p.m.	Lunch on Your Own	
1:30 p.m. – 5:00 p.m.	Official Session – Open Hearings Continued	Colorado Ballroom
1:30 p.m. – 5:00 p.m.	Committee Work Sessions (To be announced) Specifications and Tolerances Committee Laws and Regulations Committee Professional Development Committee NTEP Committee Board of Directors	Mt. Princeton Mt. Oxford Mt. Harvard Mt. Sopris A Mt. Sopris A

Tuesday, July 26, 2016

7:00 a.m. – 9:00 a.m.	Light Breakfast	Colorado Foyer
7:00 a.m. – 5:00 p.m.	Registration and Exhibits	Colorado Foyer
8:00 a.m. – 9:45 a.m.	Official Session – Open Hearings (continued as necessary) Presiding Officer Mr. Steve Harrington, Oregon	Colorado Ballroom
9:45 a.m. – 10:00 a.m.	Break	
10:00 a.m. – 12:00 p.m.	General Session Pledge of Allegiance and Invocation Chaplain Mr. Constantine Cotsoradis, Flint Hills Resources Welcome Address Lt. Governor Donna Lynne (tentative) President’s Address Dr. Willie May NIST Director Chairman’s Address Chairman Mr. Jerry Buendel, Washington State Signing of the NCWM/Measurement Canada MRA Awards Ceremony	
12:00 p.m. – 1:30 p.m.	Lunch on Your Own	
1:30 p.m. – 4:45 p.m.	Technical Sessions	Colorado Ballroom
1:30 p.m. – 2:15 p.m.	The United States Mint at Denver – Gold, Coins and Embezzlement Mr. Thomas Fesing	
2:15 p.m. – 3:15 p.m.	Understanding Transportation Network Systems Ms. Andrea Ambrose Lobato, Lyft Mr. Bob O’Leary, Uber	
3:15 p.m. – 3:30 p.m.	Break	
3:30 p.m. – 4:30 p.m.	Regulatory Considerations for Legalized Marijuana Ms. Julie Quinn, Minnesota Mr. Nick Brechun, Colorado	
1:30 p.m. – 5:00 p.m.	Committee Work Sessions Specifications and Tolerances Committee Laws and Regulations Committee Professional Development Committee Board of Directors / NTEP Committee	Mt. Princeton Mt. Oxford Mt. Harvard Mt. Sopris A
5:00 p.m. – 6:00 p.m.	Associate Membership Committee	Colorado Ballroom
8:00 p.m.	Addendum Sheets Available	Colorado Foyer

Schedule of Events

Wednesday, July 27, 2016		
7:00 a.m. – 9:00 a.m.	Light Breakfast	Colorado Foyer
7:00 a.m. – 3:30 p.m.	Registration and Exhibits	Colorado Foyer
9:00 a.m. – 12:00 p.m.	Regional Association Meetings	
	Central Weights and Measures Association	Mt. Columbia
	Northeastern Weights and Measures Association	Maroon Peak
	Southern Weights and Measures Association	Mt. Oxford
	Western Weights and Measures Association	Mt. Sopris
12:00 p.m. – 1:00 p.m.	Lunch on Your Own	
1:00 p.m. – 4:30 p.m.	Voting Session	Colorado Ballroom
	Presiding Officer Mr. Tim Chesser, Arkansas Parliamentarian Mr. Louis Straub, Fairbanks Scale, Inc.	
	Professional Development Committee	
	Specifications and Tolerances Committee	
	Laws and Regulations Committee	
5:30 p.m. – 9:30 p.m.	Special Event: Sports Authority Field at Mile High	
	Please join us for this unique experience at the home of the Denver Broncos! This is an all inclusive evening of food, fun and entertainment. *Meet in hotel lobby at 5:30 p.m. to load buses.	
Thursday, July 28, 2016		
7:00 a.m. – 9:00 a.m.	Light Breakfast	Colorado Foyer
7:00 a.m. – 10:00 a.m.	Registration and Exhibits	Colorado Foyer
9:00 a.m. – 12:00 p.m.	Voting Session Continued	Colorado Ballroom
	Presiding Officer Mr. Laurence Nolan, Los Angeles County Parliamentarian Mr. Louis Straub, Fairbanks Scale, Inc.	
	NTEP Committee	
	Board of Directors	
	Nominating Committee	
	Closing Ceremony	Colorado Ballroom
	Passing of the Gavel	
	New Chairman's Address	
	Benediction	
	Adjourn	

Organization Chart

NCWM Board of Directors			
Office	Name	Affiliation	Term Ends
Chairman	Jerry Buendel	Washington	2016
Chairman-Elect	Kristin Macey	California	2016
Immediate Past Chair	Ronald Hayes	Missouri	2016
Treasurer	Raymond Johnson	New Mexico	2016
Active Membership – Western	Brett Gurney	Utah	2017
Active Membership – Southern	Kenneth Ramsburg	Maryland	2018
Active Membership – Northeastern	James Cassidy	City of Cambridge, Massachusetts	2019
Active Membership – Central	Craig VanBuren	Michigan	2020
At-Large	Chuck Corr	Archer Daniels Midland Company	2018
At-Large	Steve Giguere	Maine	2016
Associate Membership	Christopher Guay	Procter and Gamble, Co.	2016
Honorary NCWM President	Dr. Willie May	NIST Director	NA
Executive Director	Don Onwiler	NCWM	NA
Executive Secretary	Vacant	NIST, Office of Weights and Measures	NA
NTEP Administrator	Jim Truex	NCWM	NA
Measurement Canada Advisor	Carl Cotton	Measurement Canada	NA
National Type Evaluation Program Committee (NTEP)			
Office	Name	Affiliation	Term Ends
Committee Chair	Ronald Hayes	Missouri	2016
Member	Jerry Buendel	Washington	2017
Member	Kristin Macey	California	2018
Member	Kenneth Ramsburg	Maryland	2018
Member	James Cassidy	Massachusetts	2019
NTEP Administrator	Jim Truex	NCWM	NA
Finance Committee			
Office	Name	Affiliation	Term Ends
Committee Chair	Kristin Macey	California	2016
Nominated Chair-Elect	James Cassidy	City of Cambridge, Massachusetts	2017
Member	Raymond Johnson	New Mexico	2016
Member	Christopher Guay	Procter and Gamble, Co.	2016
Executive Director	Don Onwiler	NCWM	NA

Organization Chart

Laws and Regulations Committee (L&R)			
Office	Name	Affiliation	Term Ends
Committee Chair	Richard Lewis	Georgia	2016
Member	Louis Sakin	Towns of Hopkinton/Northbridge, Massachusetts	2017
Member	John Albert	Missouri	2018
Member	Michelle Wilson	Arizona	2019
Member	Ethan Bogren	Westchester County, New York	2020
Associate Membership Representative	Rebecca Richardson	MARC – IV Consulting	2018
Canadian Technical Advisor	Lance Robertson	Measurement Canada	NA
NIST Technical Advisor	David Sefcik	NIST, Office of Weights and Measures	NA
NIST Technical Advisor	Lisa Warfield	NIST, Office of Weights and Measures	NA
Professional Development Committee (PDC)			
Office	Name	Affiliation	Term Ends
Committee Chair	Angela Godwin	Ventura County, California	2016
Member	Stacy Carlsen	Marin County, California	2017
Member	Julie Quinn	Minnesota	2018
Member	Doug Killingsworth	Georgia	2019
Member	Cheryl Ayer	New Hampshire	2020
Associate Membership Representative	Richard Shipman	Rice Lake Weighing Systems, Inc.	2018
Safety Liaison	TBD		NA
NIST Liaison	Tina Butcher	NIST, Office of Weights and Measures	NA
Certification Coordinator	Ross Andersen	Retired	NA
Specifications and Tolerances Committee (S&T)			
Office	Name	Affiliation	Term Ends
Committee Chair	Mahesh Albuquerque	Colorado	2016
Member	Jane Zulkiewicz	Town of Barnstable, Massachusetts	2017
Member	Matthew Curran	Florida	2018
Member	Ivan Hankins	Iowa	2019
Member	Rachelle Miller	Wisconsin	2020
Canadian Technical Advisor	Luciano Burtini	Measurement Canada	NA
NIST Technical Advisor	TBD	NIST, Office of Weights and Measures	NA
NIST Technical Advisor	Rick Harshman	NIST, Office of Weights and Measures	NA
NTEP Technical Advisor	Darrell Flocken	NCWM	NA

Organization Chart

Nominating Committee			
Office	Name	Affiliation	Term Ends
Committee Chair	Ronald Hayes	Missouri	2016
Member	John Gaccione	Westchester County, New York	2016
Member	Stephen Benjamin	North Carolina	2016
Member	Kurt Floren	Los Angeles County, California	2016
Member	Randy Jennings	Tennessee	2016
Member	Joe Gomez	New Mexico	2016
Member	Charles Carroll	Massachusetts	2016
Credentials Committee			
Office	Name	Affiliation	Term Ends
Committee Chair	Fran Elson-Houston	Ohio	2016
Member	Matt Maiten	Santa Barbara County, California	2017
Member	Lori Jacobson	South Dakota	2018
Coordinator	Darrell Flocken	NCWM	NA
Appointive Officials			
Office	Name	Affiliation	Term Ends
Chaplain	Constantine Cotsoradis	Flint Hills Resources	2016
Parliamentarian	Louis Straub	Fairbanks Scale, Inc.	2016
Presiding Officer	Laurence Nolan	Los Angeles County, California	2016
Presiding Officer	Jack Walsh	Town of Wellesley, Massachusetts	2016
Presiding Officer	Tim Chesser	Arkansas	2016
Presiding Officer	Steve Harrington	Oregon	2016
Sergeant-at-Arms	Rich Holcomb	Colorado Division of Oil and Public Safety	2016
Sergeant-at-Arms	Alberto Villagomez	Colorado Division of Oil and Public Safety	2016
Sergeant-at-Arms	Scott Wagner	Colorado Division of Oil and Public Safety	2016
Associate Membership Committee			
Office	Name	Affiliation	Term Ends
Committee Chair	David Calix	NCR Corporation	2016
Vice-Chair	Richard Shipman	Rice Lake Weighing Systems, Inc.	2016
Secretary / Treasurer	Bill Callaway	Crompco	2016
Member	David Calix	NCR Corporation	2018
Member	Bill Callaway	Crompco	2018
Member	Robert Murnane, Jr.	Seraphin Test Measure	2018
Member	Paul A. Lewis, Sr.	Rice Lake Weighing Systems, Inc.	2019
Member	Richard Shipman	Rice Lake Weighing Systems, Inc.	2020
Member	Christopher Guay	Procter and Gamble, Co.	2020
Member	Mark Flint	ADM	2020
Member	Rebecca Richardson	MARC – IV Consulting	2020

Organization Chart

Fuels and Lubricants Subcommittee		
Office	Name	Affiliation
Committee Chair	Matthew Curran	Florida
Vice-Chair	Ronald Hayes	Missouri
Vice-Chair	Randy Jennings	Tennessee
Secretary	Kevin Ferrick	American Petroleum Institute
Vice-Secretary	Rebecca Richardson	MARC – IV Consulting
NIST Technical Advisor	Kenneth Butcher	NIST, Office of Weights and Measures
NIST Technical Advisor	David Sefcik	NIST, Office of Weights and Measures
NIST Technical Advisor	Lisa Warfield	NIST, Office of Weights and Measures
Advisory Member	Curtis Williams	Retired
Public Sector Member	Mahesh Albuquerque	Colorado
Public Sector Member	Stephen Benjamin	North Carolina
Public Sector Member	Tim Elliot	Washington
Public Sector Member	Kristin Macey	California
Public Sector Member	Doug Rathbun	Illinois
Public Sector Member	Bill Striejewske	Nevada
Public Sector Member	Timothy White	Michigan
Public Sector Member	Michelle Wilson	Arizona
Private Sector Member	Holly Alfano	Independent Lubricant Manufacturers Association
Private Sector Member	Matt Bjornson	Bjornson Oil Company
Private Sector Member	Bill Cannella	Chevron Global Downstream, LLC
Private Sector Member	Chuck Corr	Archer Daniels Midland Company
Private Sector Member	Davis Cosey	Davis Oil Company
Private Sector Member	Kelly Davis	Renewable Fuels Association
Private Sector Member	Dayne Delahoussaye	Neste Oil
Private Sector Member	Stan Dempsey	Colorado Petroleum Association
Private Sector Member	Ed Dougherty	Sunoco, Inc.
Private Sector Member	David Fialkov	NATSO
Private Sector Member	Rick Fragnito	Shell
Private Sector Member	Philip Guillemette	Flint Hills Resources, LP
Private Sector Member	John Harkins	Sunoco, Inc.
Private Sector Member	Marilyn Herman	Herman and Associates
Private Sector Member	Joanna Johnson	Automotive Oil Exchange Association
Private Sector Member	Patrick Kelly	American Petroleum Institute
Private Sector Member	Brian Kernke	Loves Travel Stops
Private Sector Member	Stephen Kirby	General Motors
Private Sector Member	David A. Kovach	BP Products
Private Sector Member	Mike Kunselman	Center for Quality Assurance
Private Sector Member	Jeffrey Leiter	Bassman, Mitchell, Alfano & Leiter Chtd.
Private Sector Member	Russ Lewis	Marathon Petroleum, LLC
Private Sector Member	Michael Lynch	ExxonMobil Corporation

Organization Chart

Private Sector Member	Scott Mason	Phillips 66
Private Sector Member	James McGetrick	BP Products
Private Sector Member	Kristi Moore	KMoore Consulting, LLC
Private Sector Member	Manuch Nikanjam	Chevron Global Downstream, LLC
Private Sector Member	Brian Parnell	Mapco Express
Private Sector Member	Keith Penn	Colonial Pipeline Company
Private Sector Member	Derek Regal	Tesoro Companies, Inc.
Private Sector Member	Prentiss Searles	American Petroleum Institute
Private Sector Member	Jenny Sigelko	Volkswagen Group of America
Private Sector Member	Brad Stotler	NATSO
Private Sector Member	William Studzinski	General Motors – Powertrain Division
Private Sector Member	Rob Underwood	Petroleum Marketers Association of America
Private Sector Member	Marie Valentine	Toyota -TEMA -TTC
Private Sector Member	Steve Vander Griend	ICM, Inc.
Packaging and Labeling Subcommittee		
Office	Name	Affiliation
Committee Chair	Christopher Guay	Procter and Gamble, Co.
NIST Technical Advisor	David Sefcik	NIST, Office of Weights and Measures
Public Sector – Central	Nicholas Owens	Stark County Weights and Measures, Ohio
Public Sector – Northeastern	Frank Greene	Connecticut
Public Sector – Southern	Hal Prince	Florida
Public Sector – Western	Angela Godwin	County of Ventura, California
Private Sector Member	Ann Boeckman	Kraft Food Group, Inc.
Private Sector Member	Krister Hard af Segerstad	IKEA North America Services, LLC
Private Sector Member	Zina Juroch	Pier 1 Imports
Natural Gas Steering Committee		
Office	Name	Affiliation
Committee Chair	Ethan Bogren	Westchester County, New York
Vice-Chair	Raymond Johnson	New Mexico
NIST Technical Advisor	Juana Williams	NIST, Office of Weights and Measures
Public Sector – Central	Ronald Hayes	Missouri
Public Sector – Southern	Matthew Curran	Florida
Public Sector – Western	Mahesh Albuquerque	Colorado
Public Sector Member	G. Diane Lee	NIST, Office of Weights and Measures
Private Sector Member	Jeffrey L. Clarke	NGV America
Private Sector Member	Gordon Johnson	Gilbarco, Inc.
Private Sector Member	Dmitri Karimov	Liquid Controls, LLC
Private Sector Member	Randy Moses	Wayne Fueling Systems
Private Sector Member	Prentiss Searles	American Petroleum Institute

Organization Chart

Promotional Tool Kit Task Group		
Office	Name	Affiliation
Chair	Stephen Benjamin	North Carolina
Public Sector Member	Jerry Buendel	Washington
Public Sector Member	Kurt Floren	Los Angeles County, California
Private Sector Member	Bill Callaway	Crompco
Private Sector Member	John Hughes	Rice Lake Weighing Systems, Inc.
Organometallics Task Group		
Office	Name	Affiliation
Chair	Randy Jennings	Tennessee
Public Sector Member	Ronald Hayes	Missouri
Public Sector Member	Bill Striejewske	Nevada
Private Sector Member	Marilyn Herman	Herman and Associates
Private Sector Member	Jeff Jetter	Honda R&D Americas, Inc.
Private Sector Member	Russ Lewis	Marathon Petroleum
Private Sector Member	James McGetrick	BP Products
Private Sector Member	Kristy Moore	Renewable Fuels Foundation
Private Sector Member	Derek Regal	Tesoro Chemical
Private Sector Member	Jenny Sigelko	Volkswagen Group of America
Private Sector Member	Val Ughetta	Alliance of Automobile Manufacturers

Meat, Poultry, Fish and Seafood Method of Sale Task Group		
Office	Name	Affiliation
Co-Chair	David Sefcik	NIST, Office of Weights and Measures
Co-Chair	Lisa Warfield	NIST, Office of Weights and Measures
Public Sector Member	Stephen Benjamin	North Carolina
Public Sector Member	Charles Carroll	Massachusetts
Public Sector Member	Fran Elson-Houston	Ohio
Public Sector Member	Kurt Floren	Los Angeles County, California
Public Sector Member	Roger Frazier	Arkansas
Public Sector Member	Jason Glass	Kentucky
Public Sector Member	Brett Gurney	Utah
Public Sector Member	Milton Hargrave	Virginia
Public Sector Member	Ryanne Hartman	Michigan
Public Sector Member	Lori Jacobson	South Dakota
Public Sector Member	Hal Prince	Florida
Public Sector Member	Louis Sakin	Towns of Hopkinton/Northbridge, Massachusetts
Public Sector Member	Ken Tichota	Nebraska
Public Sector Member	Phillip Wright	Texas
Private Sector Member	Dave Davis	Utah Food Industry Association
Private Sector Member	Linda Doherty	New Jersey Food Council
Private Sector Member	Eric Hardin	The Fresh Market, Inc.
Private Sector Member	Vincent Orr	Whole Foods Market
Private Sector Member	Audrey Patterson	King Williams and Gleason LLP
Private Sector Member	Michael Roberson	Publix Supermarkets
Private Sector Member	Kevin Schneider	Giant Food
Private Sector Member	Elizabeth Tansing	Food Marketing Institute

Weigh-In-Motion Task Group		
Office	Name	Affiliation
Chair	Alan Walker	Florida
NTEP Technical Advisor	Darrell Flocken	NCWM
NIST Technical Advisor	Rick Harshman	NIST, Office of Weights and Measures
Public Sector Member	Tim Chesser	Arkansas
Public Sector Member	Randy Coplin	Michigan State Police
Public Sector Member	Lenny Goebel	Illinois
Private Sector Member	Jon Arnold	Intercomp Company
Private Sector Member	Tim Broemmer	Rice Lake Weighing Systems, Inc.
Private Sector Member	Brad Fryburger	Rinstrum, Inc.
Private Sector Member	Joe Grell	Rice Lake Weighing Systems, Inc.
Private Sector Member	Randy Hanson	International Road Dynamics
Private Sector Member	Tom Kearney	USDOT - FHWA

Organization Chart

Private Sector Member	John Lawn	Rinstrum, Inc.
Private Sector Member	Louis Straub	Fairbanks Scale, Inc.
Private Sector Member	Richard Suiter	Richard Suiter Consulting
Private Sector Member	Brian Taylor	Intelligent Imaging Systems
Private Sector Member	Russ Vires	Mettler-Toledo, LLC
Private Sector Member	Matt Young	Intercomp Company
Multiple Dimension Measuring Device Work Group		
Office	Name	Affiliation
Chair	Robert Kennington	Quantronix, Inc.
NTEP Administrator	Jim Truex	NCWM
NTEP Specialist	Darrell Flocken	NCWM
Technical Advisor	Rick Harshman	NIST, Office of Weights and Measures
Public Sector Member	Tom Buck	Ohio
Public Sector Member	Fran Elson-Houston	Ohio
Public Sector Member	Justin Rae	Measurement Canada
Public Sector Member	Isabelle Tremblay	Measurement Canada
Public Sector Member	Pascal Turgeon	Measurement Canada, Policy/Regulations Group
Private Sector Member	Sprague Ackley	Honeywell
Private Sector Member	Scott Davidson	Mettler-Toledo, LLC
Private Sector Member	Michael Eichenberg	FreightSnap, LLC
Private Sector Member	Justin Harper	AOA Xinetics/NGC
Private Sector Member	Scott Henry	Zebra Technologies
Private Sector Member	Uwe Mohr	Vitronic
Private Sector Member	Scott Murchison	Zebra Technologies
Private Sector Member	Don Newell	National Motor Freight Traffic Association
Private Sector Member	Jack Pangrazio	LTS Scale Company, LLC
Private Sector Member	Tony Romeo	Datalogic
Private Sector Member	Clay Scofield	AAA Cooper Transportation
Private Sector Member	Christopher Senneff	Rice Lake Weighing Systems, Inc.
Private Sector Member	Richard Shipman	Rice Lake Weighing Systems, Inc.
Private Sector Member	Mike Stutler	United Parcel Service
Private Sector Member	Richard Suiter	Richard Suiter Consulting
Private Sector Member	Russ Vires	Mettler-Toledo, LLC
Private Sector Member	Scott Wigginton	United Parcel Service

Organization Chart

NTEP Belt-Conveyor Sector		
Office	Name	Affiliation
Chair	Peter Sirrico	Thayer Scale / Hyer Industries
NTEP Administrator	Jim Truex	NCWM
NTEP Specialist	Darrell Flocken	NCWM
Technical Advisor	John Barton	NIST, Office of Weights and Measures
Public Sector Member	Tina Butcher	NIST, Office of Weights and Measures
Public Sector Member	Zacharias Tripoulas	Maryland
Public Sector Member	Thomas Vormittag	Nevada
Private Sector Member	Rafael Jimenez	Association of American Railroads Transportation Technology Center, Inc.
Private Sector Member	Jason Kukachka	Thermo Fisher Scientific
NTEP Grain Analyzer Sector		
Office	Name	Affiliation
Chair	Karl Cunningham	Illinois
NTEP Administrator	Jim Truex	NCWM
NTEP Specialist	Darrell Flocken	NCWM
Technical Advisor	G. Diane Lee	NIST, Office of Weights and Measures
Advisory Member	Cassie Eigenmann	Retired
Public Sector Member	Randy Burns	Arkansas
Public Sector Member	Tina Butcher	NIST, Office of Weights and Measures
Public Sector Member	Ivan Hankins	Iowa
Public Sector Member	Thomas Hughes	Missouri
Public Sector Member	Jason Jordan	USDA, GIPSA, Technical Services Division
Private Sector Member	Jeffrey Adkisson	Grain and Feed Association of Illinois
Private Sector Member	Rachel Beiswenger	TSI Incorporated
Private Sector Member	Martin Clements	The Steinlite Corporation
Private Sector Member	Kathy Conover	DICKEY-john Corporation
Private Sector Member	Andrew Gell	Foss North America
Private Sector Member	Charles Hurburgh, Jr.	Iowa State University
Private Sector Member	Jess McCluer	National Grain and Feed Association
Private Sector Member	Thomas Runyon	Seedbuero Equipment Co.

Organization Chart

NTEP Measuring Sector		
Office	Name	Affiliation
Chair	Michael Keilty	Endress + Hauser Flowtec AG, USA
NTEP Administrator	Jim Truex	NCWM
NTEP Specialist	Darrell Flocken	NCWM
Technical Advisor	Clark Cooney	California Division of Measurement Standards
Public Sector Member	Luciano Burtini	Measurement Canada
Public Sector Member	Tina Butcher	NIST, Office of Weights and Measures
Public Sector Member	Joe Eccleston	Maryland
Public Sector Member	Allen Katalinic	North Carolina
Public Sector Member	John Roach	California
Private Sector Member	Steve Bar	Bennett Pump Company
Private Sector Member	Marc Buttler	Emerson Process Management / Micro Motion
Private Sector Member	William Cooper	Tuthill Transfer Systems
Private Sector Member	Constantine Cotsoradis	Flint Hills Resources
Private Sector Member	Ronnell Gallon	Zenner Performance Meters, Inc.
Private Sector Member	Paul Glowacki	Murray Equipment, Inc.
Private Sector Member	Gordon Johnson	Gilbarco, Inc.
Private Sector Member	Dmitri Karimov	Liquid Controls, LLC
Private Sector Member	Yefim Katselnik	Wayne Fueling Systems
Private Sector Member	Peter Kucmas	KROHNE
Private Sector Member	Douglas Long	RDM Industrial Electronics
Private Sector Member	Andrew MacAllister	Daniel Measurement and Control
Private Sector Member	Wade Mattar	Invensys / Foxboro
Private Sector Member	Richard Miller	FMC Technologies Measurement Solutions, Inc.
Private Sector Member	Randy Moses	Wayne Fueling Systems
Private Sector Member	Donald Mundorff	Badger Meter Scottsdale
Private Sector Member	Andre Noel	Neptune Technology Group, Inc.
Private Sector Member	Christopher (Adam) Oldham	Gilbarco, Inc.
Private Sector Member	Johnny Parrish	Brodie International
Private Sector Member	Richard Tucker	RL Tucker Consulting, LLC

NTEP Software Sector		
Office	Name	Affiliation
Chair	James Pettinato	FMC Technologies Measurement Solutions, Inc.
NTEP Administrator	Jim Truex	NCWM
NTEP Specialist	Darrell Flocken	NCWM
Secretary	Teri Gulke	Liquid Controls, LLC
Technical Advisor	Doug Bliss	Mettler-Toledo, LLC
Public Sector Member	Andrei Brezoica	California
Public Sector Member	Tom Buck	Ohio
Public Sector Member	Luciano Burtini	Measurement Canada
Public Sector Member	Joe Eccleston	Maryland
Public Sector Member	Eric Morabito	New York
Public Sector Member	Edward Payne	Maryland
Public Sector Member	John Roach	California
Public Sector Member	Ambler Thompson	NIST, Office of Weights and Measures
Public Sector Member	Zacharias Tripoulas	Maryland
Private Sector Member	Mary Abens	Emerson Process Management
Private Sector Member	John Atwood	Tyson Foods
Private Sector Member	Gary Benjamin	NCR Corporation
Private Sector Member	Benjamin Bertz	Red Seal Measurement
Private Sector Member	Kevin Detert	Avery Weigh-Tronix
Private Sector Member	Andre Elle	Endress + Hauser Flowtec AG
Private Sector Member	Andrew Gell	Foss North America
Private Sector Member	Keith Harper	Gencor Industries, Inc.
Private Sector Member	Tony Herrin	Cardinal Scale Manufacturing, Co.
Private Sector Member	Paul A. Lewis, Sr.	Rice Lake Weighing Systems, Inc.
Private Sector Member	Dominic Meyer	KSi Conveyors, Inc.
Private Sector Member	Richard Miller	FMC Technologies Measurement Solutions, Inc.
Private Sector Member	Christopher (Adam) Oldham	Gilbarco, Inc.
Private Sector Member	Mike Roach	VeriFone
Private Sector Member	Robin Sax	CompuWeigh Corporation
Private Sector Member	David Vande Berg	Vande Berg Scales
Private Sector Member	John Wind	Bizerba USA, Inc.
Private Sector Member	Kraig Wooddell	Hobart

Organization Chart

NTEP Weighing Sector		
Office	Name	Affiliation
Chair	Rob Upright	Vishay Transducers
NTEP Administrator	Jim Truex	NCWM
NTEP Specialist	Darrell Flocken	NCWM
Technical Advisor	Rick Harshman	NIST, Office of Weights and Measures
Advisory Member	Robert Feezor	Retired
Public Sector Member	L. Cary Ainsworth	USDA, GIPSA
Public Sector Member	Tina Butcher	NIST, Office of Weights and Measures
Public Sector Member	Kevin Chesnutwood	NIST, Office of Weights and Measures
Public Sector Member	Fran Elson-Houston	Ohio
Public Sector Member	Nathan Gardner	Oregon
Public Sector Member	Marcus Harwitz	USDA, GIPSA, FGIS
Public Sector Member	Robert Meadows	Kansas
Public Sector Member	Eric Morabito	New York
Public Sector Member	Edward Payne	Maryland
Public Sector Member	Zacharias Tripoulas	Maryland
Public Sector Member	Pascal Turgeon	Measurement Canada
Public Sector Member	Juana Williams	NIST, Office of Weights and Measures
Private Sector Member	Steven Beitzel	Systems Associates, Inc.
Private Sector Member	Dary Blaney	Balances Industrielles Montreal
Private Sector Member	Neil Copley	Thurman Scale Co.
Private Sector Member	Hayden Cornish	Schenck Process
Private Sector Member	Mitchell Eyles	Flintec, Inc.
Private Sector Member	Brad Fryburger	Rinstrum, Inc.
Private Sector Member	Eric Golden	Cardinal Scale Manufacturing, Co.
Private Sector Member	Jon Heinlein	Transcell Technology, Inc.
Private Sector Member	Scott Henry	Zebra Technologies
Private Sector Member	Sam Jalahej	Totalcomp, Inc.
Private Sector Member	Rafael Jimenez	Association of American Railroads Transportation Technology Center, Inc.
Private Sector Member	John Lawn	Rinstrum, Inc.
Private Sector Member	Paul A. Lewis, Sr.	Rice Lake Weighing Systems, Inc.
Private Sector Member	L. Edward Luthy	Schenck Process Transport N.A.
Private Sector Member	Louis Straub	Fairbanks Scale, Inc.
Private Sector Member	Russ Vires	Mettler-Toledo, LLC
Private Sector Member	Jerry Wang	A&D Engineering, Inc.
Private Sector Member	Walter Young	Emery Winslow Scale Company

Central Weights and Measures Association (CWMA) www.cwma.net						
States	Illinois Indiana Iowa	Kansas Michigan Minnesota	Missouri Nebraska North Dakota	Ohio South Dakota Wisconsin		
Contact	Sherry Turvey Kansas Department of Agriculture			(785) 564-6681 sherry.turvey@kda.ks.gov		
Annual Meeting	May 22 – 25, 2017			Lincoln, Nebraska		
Interim Meeting	October 3 – 5, 2016			St. Charles, Missouri		
Northeastern Weights and Measures Association (NEWMA) www.newma.us						
States	Connecticut Maine Massachusetts	New Hampshire New Jersey New York	Pennsylvania Puerto Rico Rhode Island	Vermont		
Contact	James Cassidy City of Cambridge Weights and Measures Department			(617) 349-6133 jcassidy@cambridgema.gov		
Annual Meeting	May 15 – 18, 2017			Saratoga Springs, New York		
Interim Meeting	October 25 – 26, 2016			Portsmouth, New Hampshire		
Southern Weights and Measures Association (SWMA) www.swma.org						
States	Alabama Arkansas Delaware	District of Columbia Florida Georgia	Kentucky Louisiana Maryland	Mississippi North Carolina Oklahoma	South Carolina Tennessee Texas	US Virgin Islands Virginia West Virginia
Contact	Philip Wright Texas Department of Agriculture			(512) 463-5706 Philip.Wright@TexasAgriculture.gov		
Annual Meeting	October 16 – 19, 2016			Fort Worth, Texas		
Western Weights and Measures Association (WWMA) www.westernwma.org						
States	Alaska Arizona California	Colorado Hawaii Idaho	Montana Nevada New Mexico	Oregon Utah Washington	Wyoming	
Contact	Jeri Kahana Hawaii Department of Agriculture			(808) 832-0707 Jeri.M.Kahana@hawaii.gov		
Annual Meeting	September 11 – 15, 2016			Honolulu, Hawaii		

Organization Chart

Past Chairmen			
Conference	Year	Location	Chairman
1 st	1905	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
2 nd	1906	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
3 rd	1907	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
4 th	1908	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
	1909	Conference Was Not Held	
5 th	1910	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
6 th	1911	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
7 th	1912	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
8 th	1913	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
9 th	1914	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
10 th	1915	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
11 th	1916	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
	1917	Conference Was Not Held	
	1918	Conference Was Not Held	
12 th	1919	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
13 th	1920	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
14 th	1921	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
15 th	1922	Washington, D.C.	Dr. S.W. Stratton, Bureau of Standards
16 th	1923	Washington, D.C.	Dr. George Burgess, Bureau of Standards
17 th	1924	Washington, D.C.	Dr. George Burgess, Bureau of Standards
18 th	1925	Washington, D.C.	Dr. George Burgess, Bureau of Standards
19 th	1926	Washington, D.C.	Dr. George Burgess, Bureau of Standards
20 th	1927	Washington, D.C.	Dr. George Burgess, Bureau of Standards
21 st	1928	Washington, D.C.	Dr. George Burgess, Bureau of Standards
22 nd	1929	Washington, D.C.	Dr. George Burgess, Bureau of Standards
23 rd	1930	Washington, D.C.	Dr. George Burgess, Bureau of Standards
24 th	1931	Washington, D.C.	Dr. George Burgess, Bureau of Standards
	1932	Conference Was Not Held	
	1933	Conference Was Not Held	
	1934	Conference Was Not Held	
25 th	1935	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
26 th	1936	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
27 th	1937	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
28 th	1938	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
29 th	1939	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
30 th	1940	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
31 st	1941	Washington, D.C.	Dr. Lyman Briggs, National Bureau of Standards
	1942	Conference Was Not Held	
	1943	Conference Was Not Held	
	1944	Conference Was Not Held	
	1945	Conference Was Not Held	
32 nd	1946	Washington, D.C.	Dr. E.U. Condon, National Bureau of Standards
33 rd	1947	Washington, D.C.	Dr. E.U. Condon, National Bureau of Standards
	1948	Conference Was Not Held	
34 th	1949	Washington, D.C.	Dr. E.U. Condon, National Bureau of Standards
35 th	1950	Washington, D.C.	Dr. E.U. Condon, National Bureau of Standards
36 th	1951	Washington, D.C.	Dr. E.U. Condon, National Bureau of Standards
37 th	1952	Washington, D.C.	Dr. A.V. Astin, National Bureau of Standards
38 th	1953	Washington, D.C.	Dr. A.V. Astin, National Bureau of Standards
39 th	1954	Washington, D.C.	Dr. A.V. Astin, National Bureau of Standards
40 th	1955	Washington, D.C.	Dr. A.V. Astin, National Bureau of Standards

Past Chairmen			
Conference	Year	Location	Chairman
41 st	1956	Washington, D.C.	Dr. A.V. Astin, National Bureau of Standards
42 nd	1957	Washington, D.C.	Dr. A.V. Astin, National Bureau of Standards
43 rd	1958	Washington, D.C.	J.P. McBride, MA
44 th	1959	Washington, D.C.	C.M. Fuller, CA
45 th	1960	Washington, D.C.	H.E. Crawford, FL
46 th	1961	Washington, D.C.	R.E. Meek, IN
47 th	1962	Washington, D.C.	Robert Williams, NY
48 th	1963	Washington, D.C.	C.H. Stender, SC
49 th	1964	Washington, D.C.	D.M. Turnbull, WA
50 th	1965	Washington, D.C.	V.D. Campbell, OH
51 st	1966	Denver, CO	J.F. True, KS
52 nd	1967	Washington, D.C.	J.E. Bowen, MA
53 rd	1968	Washington, D.C.	C.C. Morgan, IN
54 th	1969	Washington, D.C.	S.H. Christie, NJ
55 th	1970	Salt Lake City, UT	R.W. Searles, OH
56 th	1971	Washington, D.C.	M. Jennings, TN
57 th	1972	Washington, D.C.	E.H. Black, CA
58 th	1973	Minneapolis, MN	George Johnson, KY
59 th	1974	Washington, D.C.	John Lewis, WA
60 th	1975	San Diego, CA	Sydney Andrews, FL
61 st	1976	Washington, D.C.	Richard Thompson, MD
62 nd	1977	Dallas, TX	Earl Prideaux, CO
63 rd	1978	Washington, D.C.	James Lyles, VA
64 th	1979	Portland, OR	Kendrick Simila, OR
65 th	1980	Washington, D.C.	Charles Vincent, TX
66 th	1981	St. Louis, MO	Edward Stadolnik, MA
67 th	1982	Atlanta, GA	Edward Heffron, MI
68 th	1983	Sacramento, CA	Charles Greene, NM
69 th	1984	Boston, MA	Sam Hindsman, AR
70 th	1985	Washington, D.C.	Ezio Delfino, CA
71 st	1986	Albuquerque, NM	George Mattimoe, HI
72 nd	1987	Little Rock, AR	Frank Nagele, MI
73 rd	1988	Grand Rapids, MI	Darrell Guensler, CA
74 th	1989	Seattle, WA	John Bartfai, NY
75 th	1990	Washington, D.C.	Fred Gerck, NM
76 th	1991	Philadelphia, PA	N. David Smith, NC
77 th	1992	Nashville, TN	Sidney Colbrook, IL
78 th	1993	Kansas City, MO	Allan Nelson, CT
79 th	1994	San Diego, CA	Thomas Geiler, MA
80 th	1995	Portland, ME	James Truex, OH
81 st	1996	New Orleans, LA	Charles Gardner, NY
82 nd	1997	Chicago, IL	Barbara Bloch, CA
83 rd	1998	Portland, OR	Steven Malone, NE
84 th	1999	Burlington, VT	Aves Thompson, AK
85 th	2000	Richmond, VA	Wes Diggs, VA
86 th	2001	Washington, DC	Louis Straub, MD
87 th	2002	Cincinnati, OH	Ronald Murdock, NC
88 th	2003	Sparks, NV	Ross Andersen, NY
89 th	2004	Pittsburgh, PA	Dennis Ehrhart, AZ
90 th	2005	Orlando, FL	Wes Diggs, VA
91 st	2006	Chicago, IL	Don Onwiler, NE

Past Chairmen			
Conference	Year	Location	Chairman
92 nd	2007	Salt Lake City, UT	Michael Cleary, CA
93 rd	2008	Burlington, VT	Judy Cardin, WI
94 th	2009	San Antonio, TX	Jack Kane, MT
95 th	2010	St. Paul, MN	Randy Jennings, TN
96 th	2011	Missoula, MT	Tim Tyson, KS
97 th	2012	Portland, ME	Kurt Floren, CA
98 th	2013	Louisville, KY	Stephen Benjamin, NC
99 th	2014	Detroit, MI	John Gaccione, NY
100 th	2015	Philadelphia, PA	Ronald Hayes, MO
101 st	2016	Denver, CO	Jerry Buendel, WA

Past Chairmen

General Information

PURPOSE

NCWM meetings are held throughout the year to develop the national standards that are adopted by NCWM and published in *NIST Handbooks 44, 130, and 133*. At the Annual Meeting, committees will conduct Open Hearings where all attendees have the opportunity to offer comments to the committees on items printed in the Committee Interim Reports. Following Open Hearings, the committees will convene in work sessions to prepare addendum sheets that modify their reports. Items given voting status by the committees will be presented during the Voting Sessions on Wednesday and Thursday. Active members in attendance may vote on committee recommendations to amend the national standards.

WELCOME LUNCHEON FOR NEW ATTENDEES

All attendees who are participating for the first time are encouraged to attend the complimentary orientation luncheon on Sunday. This session acquaints attendees with the organization and procedures of NCWM. This luncheon is by invitation only.

Sunday, July 24, 2016

11:30 a.m. – 12:45 p.m.

New Attendees Lunch (*By invitation only*)

COMMITTEE REFERENCE KEY

The Interim Committee Reports are presented in *NCWM Publication 16*. All agenda items to be addressed by the committees are assigned reference key numbers as follows:

Reference Key	Committee
100 Series	Board of Directors (BOD)
200 Series	Laws and Regulations Committee (L&R)
300 Series	Specifications and Tolerances Committee (S&T)
400 Series	Professional Development Committee (PDC)
500 Series	National Type Evaluation Program Committee (NTEP)
800 Series	Nominating Committee

APPENDICES

Background discussion of the agenda items for the Laws and Regulations Committee and Specifications and Tolerances Committee have been placed in an appendix following the respective agenda to simplify the agenda for readers and attendees. Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/annual/publication-16 to review these documents.

DESIGNATION OF ITEM STATUS

The Committee Interim Reports contain recommendations and information on items discussed at the 2016 NCWM Interim Meeting held January 10-13, 2016 in San Diego, California. These reports form the basis for conduct of the committee meetings. The committees will present the items in their reports during Open Hearings.

The status of each item contained in the Committee Interim Reports is designated as one of the following:

- **Developing Item:** The item is designated with a “**D**” to indicate an item has merit; however, the item was returned to the submitter or other designated party for further development before any action can be taken at the national level.
- **Informational Item:** The item is designated with an “**I**” to indicate the item is under consideration by the committee but not proposed for Voting.
- **Voting Item:** The item is designated with a “**V**” to indicate the committee is making recommendations requiring a vote by the active members of NCWM. The recommended language to be voted on is in **bold face type**.
- **Withdrawn Item:** The item is designated with a “**W**” to indicate the item has been removed from consideration by the committee.

Some Voting Items are considered individually, others may be grouped in a consent calendar. Consent calendar items are Voting Items that the committee has assembled as a single Voting Item during their deliberation after the Open Hearings on the assumption that the items are without opposition and will not require discussion. The Voting Items that have been grouped into consent calendar items will be listed on the addendum sheets which are published during the week. Prior to adoption of the consent calendar, the committee will entertain any requests from the floor to remove specific items from the consent calendar to be discussed and voted upon individually.

Committees may change the status designation of agenda items (Developing, Informational, Voting, and Withdrawn) up until the report is adopted, except that items which are marked Developing, Informational or Withdrawn cannot be changed to Voting Status. Any change from the Committee Interim Report (as contained in this publication) or from what appears on the addendum sheets will be explained to the attendees prior to a motion and will be acted upon by the active members of NCWM prior to calling for the vote.

ADDENDUM SHEETS

Modifications to the Committee Interim Reports will be documented in the form of addendum sheets prepared by the committees following the Open Hearings. The addendum sheets will be made available to attendees no later than 8:00 p.m. on Tuesday, July 26, 2016, in the Colorado Foyer of the Grand Hyatt Denver Hotel. Committee Interim Reports may be further modified as a result of actions taken by the committee or membership during the Voting Sessions on July 27-28, 2016.

VOTING SYSTEM

All registered attendees may comment on items during open hearings and voting sessions of both business and technical items. However, the adoption of technical items and committee reports is to be decided by a formal vote of the active members in accordance with the following voting structures and procedures. For business items presented by the Board of Directors, all NCWM Associate, Advisory and Active members are eligible to vote. Please see NCWM Bylaws at www.ncwm.net/about/bylaws for a complete description of the voting system.

House of State Representatives:

This body is comprised of one Active member from each state who is officially designated as its representative and is present and registered at the Annual Meeting. They shall vote on:

- all business issues relating to NCWM, Inc.,
- technical questions before the Corporation, including reports and recommendations of all Standing Committees, and
- technical issues relating to weights and measures; technical handbooks; and legal metrology.

Members of this house are identified by a name tag ribbon with the word “Representative.”

House of Delegates:

This body is comprised of all other Active members who are registered and present at the Annual Meeting and those not seated in the House of State Representatives. They shall vote on:

- all business issues relating to NCWM, Inc.
- technical questions before the Corporation, including reports and recommendations of all Standing Committees
- technical issues relating to weights and measures; technical handbooks; and legal metrology.

Members of this house are identified by a name tag ribbon with the word “Delegate.”

House of General Membership:

This body is comprised of associate and advisory members who are present and registered at the Annual Meeting. They shall vote on:

- all business issues relating to NCWM, Inc.

WRITTEN COMMENTS OR ORAL STATEMENTS

Any person or organization wanting to provide a formal presentation during a committee session should make the request in writing to the Executive Director. Reasonable limitations on time allotted for presentations will be imposed. The process to request permission to give a presentation is available at www.ncwm.net/meetings/annual/meeting-process. *Note: Only registered attendees may make presentations.*

National Conference on Weights and Measures
Attn: Don Onwiler, Executive Director
1135 M Street, Suite 110
Lincoln, NE 68508
(402) 434-4880
don.onwiler@ncwm.net

PARTICIPATION

All sessions are open to registered attendees of the conference. If a committee must discuss any issue that involves proprietary information or other confidential material; that portion of the session dealing with the special issue may be closed provided that:

1. NCWM Chairman or, in his absence, the Chairman-Elect approves;
2. the Executive Director is notified; and
3. an announcement of the closed meeting is posted on or near the door to the meeting session and at the registration desk.

If at all possible, the posting will be done at least a day prior to the planned closed session. Please note that a one-day notice will not be possible if a closed meeting is called on Sunday. Since participants may make their travel reservations in order to attend technical meetings scheduled for Sunday, every effort will be made to limit any required closed meetings to only part of Sunday.

REPORTS

There will be no transcript of the proceedings of the Annual Meeting. Each committee will prepare its annual report containing its recommendations based upon the presentations, discussions, and deliberations on all matters in its interim report that were addressed during the Annual Meeting. These reports will be published in the *Report of the 101st Annual Meeting of the National Conference on Weights and Measures*, to be posted to NCWM website at www.ncwm.net. Electronic copies of the *Report of the 101st Annual Meeting of the National Conference on Weights and Measures* will be distributed to all members of NCWM. Other interested parties may request a copy of the publication from the Executive Secretary.

National Institute of Standards and Technology
Office of Weights and Measures
100 Bureau Drive
Gaithersburg, MD 20899-2600
(301) 975-4004

INTERIM MEETING

NCWM Interim Meeting will be held at The Hyatt Regency San Antonio in San Antonio, Texas, January 8-11, 2017. See www.ncwm.net for additional information.

UNITS OF MEASUREMENT

In keeping with the provisions of the Omnibus Trade and Competitiveness Act of 1988, which establishes the metric system as the preferred system of measurement for commerce and trade, units of the metric system have been used in this document, except where industry has not yet converted from the inch-pound system. In some instances, submitted proposals quoted in the committee agendas may appear in inch-pound units only.