

Professional Development Committee (PDC)

2019 Interim Meeting Agenda

Mr. Gene Robertson, Committee Chair
Mississippi

INTRODUCTION

The PDC will address the following items in Table A during the Interim Meeting. Table A identifies the agenda items by reference key, title of item, page number and the appendices by appendix designations. The first four digits of an item's reference key are assigned from the Subject Series List. The acronyms for organizations and technical terms used throughout the agenda are identified in Table B. In some cases, background information will be provided for an item. The fact that an item appears on the agenda does not mean it will be presented to National Conference on Weights and Measures (NCWM) for a vote. The Committee will review its agenda and may withdraw some items, present some items for information meant for additional study, issue interpretations, or make specific recommendations for change to the publications identified which will be presented for a vote at the Annual Meeting. The Committee may also take up routine or miscellaneous items brought to its attention after the preparation of this document. The Committee may decide to accept items for discussion that are not listed in this document, providing they meet the criteria for exceptions as presented in Section H of the introductions to *NIST Handbook 44* and *NIST Handbook 130*. The Committee has not determined whether the items presented will be Voting or Informational in nature; these determinations will result from their deliberations at the Interim Meeting.

An "Item Under Consideration" is a statement of proposal and not necessarily a recommendation of the Committee. Suggested revisions are shown in **bold face print** by ~~striking out~~ information to be deleted and underlining information to be added. Requirements that are proposed to be nonretroactive are printed in *bold faced italics*.

All sessions are open to registered attendees of the conference. If the 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 if (1) the 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 possible, the posting will be done at least a day prior to the planned closed session.

Note: It is policy to use metric units of measurement in publications; however, recommendations received by NCWM technical committees and regional weights and measures associations have been printed in this publication as submitted. Therefore, the report may contain references to inch-pound units.

Subject Series List

Education	EDU Series
Program Management	PMT Series
Other Items	OTH Series

**Table A
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**Table B
Glossary of Acronyms and Terms**

Acronym	Term	Acronym	Term
ADDIE	Analysis, Design, Development, Implementation, and Evaluation	NEWMA	Northeastern Weights and Measures Association
ANSI	American National Standards Institute	NIST	National Institute of Standards and Technology
BOK	Body of Knowledge	OWM	Office of Weights and Measures
CWMA	Central Weights and Measures Association	PDC	Professional Development Committee
ISO	International Standardization Organization	RSA	Registered Service Agents
ICE	Institute for Credentialing Excellence	SME	Subject Matter Expert
NCWM	National Conference on Weights and Measures	SWMA	Southern Weights and Measures
		WWMA	Western Weights and Measures Association

Details of All Items
(In order by Reference Key)

1 **EDU – EDUCATION**

2 **EDU-1 I Professional Certification Program**

3 The NCWM presently has six professional certification exams and two basic competency exams. The certification
4 exams include Retail Motor Fuel Dispensers, Vehicle-Tank Meters, Small Capacity Scales, Medium Capacity
5 Scales, Large Capacity Scales, and Basic Package Checking. The competency exams include Basic Weighing
6 Devices and Basic Liquid-Measuring Devices. Certifications must be renewed every five years. The NCWM is
7 implementing a process to notify candidates whose certificates are expiring each quarter.

8
9 At the 2018 Annual Meeting, the Certification Coordinator reported on progress on the LPG Liquid Measuring
10 exam. He announced that work was progressing with NIST OWM to implement TP-27, a product of the API, ASTM
11 and Gas Processors Association. TP-27 provides an electronic algorithm for computing temperature corrections to
12 liquid volume that supersedes ASTM Table 24. The work with OWM also corrects minor errors in another table
13 (Table 2) used to calculate uncompensated (gross) errors. OWM used the new tables in training provided in June in
14 Ohio, and they plan to make a broad distribution of the new tables shortly. States will not have to make procedural
15 changes to calculations or forms; just substitute the new tables for the old ones, i.e. new Table 24E for Table 24 and
16 new Table 2 for old Table 2. The NCWM exam will use the new OWM tables and plans to publish them with the
17 exam announcement so people can become familiar with them before taking the exam.

18
19 Work is also progressing on the exam for precision scales. These are predominantly Class 1 and Class II devices
20 used in pharmacy, jewelers, and cannabis applications. After that the present priority list has price verification as the
21 next exam in the pipeline. The Committee encourages dialog on the priorities for future development of exams.
22 Please let the Committee know what areas should be getting priority.

23
24 The NCWM Board has approved the rules for candidates and proctors. Proctoring is a vital component of any future
25 plans to get our certification program accredited. Executive Director Don Onwiler has worked with counsel to create
26 legal terms of agreement for proctors which will be sent out soon to states so they can begin selecting proctors. The
27 Board decided to send a notice to state directors allowing 30 days for states to get their proctors signed up. After the
28 30 days, all exams require a proctor. With proctoring in place, the NCWM can begin hosting the basic competency
29 exams. Under the proctoring agreement the proctor's organization will provide the computer access and ensure
30 details in the proctoring agreement are met. Only materials authorized in the exam announcement will be allowed
31 and these will be collected before the candidate leaves the room.

32
33 The process for taking an exam will still require the candidate to log in with their credentials. However, the
34 candidate will only get access to the exam after the proctor logs in with their credentials. The candidate may still log
35 in without a proctor to view their exam history and to reprint certificates. Candidates should take care to retain their
36 credentials for this purpose.

37
38 Since the Annual Meeting, a few additional changes had to be made to the proctoring rules. These changes attempt
39 to accommodate states that are proctoring the exam for multiple candidates all at the same time. This can create
40 hardships for the proctoring organization in that they would have to have multiple copies of the allowed reference
41 materials, like Handbooks 44 or 133. The NCWM Executive Director has worked out a compromise that allows the
42 use of an electronic version of the reference materials prepared by NCWM and have this accessible on the computer
43 used to take the exam. Alternatively, they could print hard copies of the pdf file for candidates to use during the
44 exam. The pdf file for Retail Motor Fuel Devices, for example, would include Handbook 44 Introduction, General
45 Code, LMD Code, and Appendices A, C, and D. These pdf files will be accessible through the exam announcement
46 and candidates may download the files to practice with them prior to taking the exam.

47 In addition, the NCWM has decided to create two tiers of proctors. The first-tier proctor may proctor only basic
48 competency exams for either public sector or private sector candidates. These proctors will be permitted to be direct

1 supervisors of the public sector candidates, which is not permitted in the rules originally proposed for professional
2 certification. The second tier may proctor both basic competency exams and professional certification exams. These
3 proctors may not be direct supervisors of the candidates as originally specified in the proctoring rules.
4

5 At its spring meeting, the Board reviewed the proposed exit survey questions prepared by the Committee to get
6 feedback on the certification exams. The Committee met during the Annual Meeting to respond to the Board's
7 concerns regarding the length of the survey and necessity of specific questions. The Committee streamlined the
8 survey and hopes the survey will be implemented in the near future. After taking an exam, the plan is to provide the
9 candidate with a link to take the survey, and a link to the survey from the certification section of the NCWM
10 website.
11

12 **Regional Association Comments:**

13 WWMA 2018 Annual Meeting: The WWMA Professional Development Committee heard no comments during the
14 open hearings. The WWMA fully supports the efforts of the NCWM PDC in developing additional exams, and the
15 administration and improvement of the current exams.
16

17 NEWMA 2018 Interim Meeting: There were supportive comments for the Professional Certification program to
18 move forward with the precision scale certification exam. With more states adopting the sale of cannabis there will
19 be a growing need for proficiency in this area.
20

21 SWMA 2018 Annual Meeting: The Chairman informed the conference that since the proctoring started September
22 1st, the process is working well. No other comments were received.
23

24 CWMA 2018 Interim Meeting: No comments received.

25 **EDU-2 I Training**

26 The purpose of this item is to share best practices and approaches to training in response to the broad training needs
27 of weights and measures jurisdictions and to serve as a link to various training materials on the web.
28

29 Tina Butcher (NIST OWM) has continued to provide updates on training provided to the weights and measures
30 community by NIST OWM. At the 2018 Interim and Annual Meetings, Mrs. Butcher provided updates on OWM
31 training for federal fiscal year 2017 and 2018, including upcoming training in the remainder of 2018 and 2019. At
32 the 2018 NCWM Annual Meeting, the Committee agreed that OWM can simplify this in the future by reporting
33 activities based on the calendar year. A full listing of courses completed in 2017 and 2018 can be found in the 2018
34 PDC Final Report. Upcoming OWM training for the remainder of 2018 and the first part of 2019 is included below
35 for reference.
36

37 **Packaging & Price Verification**

- 38 • **NIST HB 133 – Checking the Net Contents of Packaged Goods, Basic**
 - 39 ○ *Upcoming: April 1-4, 2019 – Gaithersburg, MD*
 - 40 ○ *Upcoming: April 15-18, 2019 – Glendale, AZ*

41
42 **Laboratory Metrology**

- 43 • **Fundamentals of Metrology**
 - 44 ○ *Upcoming: October 29 - November 2, 2018; Feb 4-8, 2019; Feb 11-15, 2019*
- 45 • **Mass Metrology Seminar**
 - 46 ○ *Upcoming: Oct 15-26, 2018; March 11-22, 2019*
- 47 • **Advanced Mass Seminar**
 - 48 ○ *Upcoming: August 13-23, 2018; April 29-May 9, 2019*
- 49 • **Volume Metrology**
 - 50 ○ *Upcoming: August 12-16, 2019*
- 51 • **Selecting Field Standards/Hoisting & General Safety**
 - 52 ○ *Upcoming: September 2018 – WWMA - WY*

- *Upcoming: October 2018 – SWMA - FL*
- **Regional Measurement Assurance Programs (RMAPs)**
 - MidAmerica Measurement Assurance Program (MidMAP)
 - *Upcoming: October 1-4, 2018*
 - Southwestern Measurement Assurance Program (SWAP)
 - *Upcoming: September 17-20, 2018*
 - Northeast Measurement Assurance Program (NEMAP)
 - *Upcoming: September 10-13, 2018*

Weighing and Measuring Devices

- **LPG Liquid-Measuring Systems**
 - *Upcoming: Spring 2019 - TN*
- **Vehicle-Tank Meters**
 - *Upcoming: Spring 2019 - KS*

General

- **Measurement Systems for Legal Metrology – New Webinar**
 - Intro to measurement system basics, including the use of unit symbols, prefixes, and transitioning within/between measurement systems. Ideal for those unfamiliar with performing unit conversion calculations.

A complete list of upcoming OWM training events is available on the calendar of events on the OWM website at:

<https://www.nist.gov/pml/weights-and-measures/about-owm/calendar-events>

Ms. Butcher noted the NIST Office of Weights and Measures (OWM) has been asked by multiple Regional Weights and Measures Associations (Regionals) to offer training seminars in conjunction with their annual meetings. OWM welcomes and appreciates the opportunity to offer training in this venue and reach multiple jurisdictions at once. To assist in planning for training in 2019 and in developing materials for future courses, OWM has asked for feedback from each Regional. Drawing from its full list of training topics, OWM identified topics on which OWM is prepared to offer training at the 2019 Regional meetings (and would lend themselves to the time constraints of a Regional) as shown below and distributed this list to each Region’s main point of contact at the beginning of June.

Packaging and Labeling and Price Verification:	
	Price Verification Test Procedures (1-2 days)
	Uniform Packaging & Labeling Regulation (4 days)
	Uniform Packaging & Labeling Regulation – Overview (1 day)
	NIST Handbook 133 – Chapters 1 and 2, Gravimetric Testing (4 days)
	NIST Handbook 133 – Chapters 1 and 2, Gravimetric Testing – Overview (1 day)
Devices:	
	Livestock and Animal Scales (3 days)
	Medium-Capacity Scales (3 days)
	Retail Computing Scales (3 days)
	Retail Motor-Fuel Dispensers Short Course (3-1/2 days)
	Selection and Testing of Reference Scales (1 day)
	Vehicle and Axle-Load Scales (3 days)
	Vehicle-Tank Meters (3 days)

OWM hopes to identify one or two training topics that would be of interest to multiple Regionals to help maximize the use of its resources in preparing for the training. OWM is also seeking feedback from the Regionals and others on ideas for *future* topics that may be needed to assist jurisdictions with addressing changes in technology and marketplace practices.

1 OWM discussed these training options with the regions during their scheduled meetings Wednesday morning at the
2 Annual Meeting. Mrs. Butcher also noted OWM would like to use a similar approach of obtaining regional input
3 each year to help OWM better meet any requests for training by OWM that the regions might have.
4

5 **Regional Association Comments:**

6 WWMA 2018 Annual Meeting: The WWMA Professional Development Committee heard the following comments
7 during open hearings:

- 8 • John Young (Yolo County, CA) would like to have the following training offered by NIST at the WWMA
9 annual meeting: Gravimetric testing for mass flow meters and liquid measuring devices such as CNG,
10 LNG, Hydrogen, and bulk oil; electric vehicle charging stations; and training on how to select the proper
11 master meter for different products.
- 12 • Tina Butcher (NIST OWM) would like the various regions to begin discussions as early as possible
13 regarding training requests for the 2020 and beyond regional meetings. There are a limited number of NIST
14 trainings courses that will fit into the schedule for a regional meeting, the NIST OWM would like each
15 region to prioritize the type of trainings from the list currently offered by NIST. Other considerations would
16 be equipment requirements available to conduct the training.
- 17 • Kipp Blauer (NV) would like precision scale training focused on scales used to weigh tobacco-like
18 products. Training should be targeted on the practical use of the scales, rather than NTEP requirements.
- 19 • Tina Butcher stated that NIST, being a federal government agency, could not conduct training specifically
20 related to the cannabis industry.
- 21 • Kevin Merritt (ID) would like training on gravimetric testing of bulk oil meters.
- 22 • Marco Mares (San Diego County, CA) would also like to see a course on gravimetric testing.
- 23 • Cathy Fisher (Santa Barbara County, CA) would like training on precision scales and package labeling.
24 Cathy also mentioned that the 2018 Farm Bill now allows the growing of industrial hemp in all states with
25 regulatory programs.
- 26 • Jerry Johnson (WY) would like training on forklift scales.
- 27 • Tina Butcher suggested the WWMA PDC committee poll the western region states to select the top three
28 topics for training offered by NIST at the regionals.
- 29 • Stan Toy (Santa Clara County, CA) wanted clarification as to whether gravimetric training currently
30 offered by NIST would be applicable to the bulk oil and other device training requested by other
31 jurisdictions. Tina responded that this training was focused on packaged products.
- 32 • Brett Gurney (UT) would like training on audit trails
33

34 NEWMA 2018 Interim Meeting: Concerns were given regarding the ability to send multiple employees to out of
35 state training due to budgetary issues. States can have different training qualifications for inspectors and sealers.
36 Walt Remmert (PA) voiced support and a desire for NIST to produce video training that can be easily accessed by
37 jurisdictions. Videos on inspections and EPO'S would be valuable for jurisdictions to use. Related comments were
38 made that this form of recorded on line education could reach many more inspectors than hands on training.
39 Recommendations for Safety to be included in future training was supported. The committee encourages NIST to
40 explore the possibility of producing video trainings that can be made available to jurisdictions. The Committee
41 would like to thank our NIST partners for their continued assistance with training and technical work.
42

43 SWMA 2018 Annual Meeting: The chairman informed the conference that NIST will use the top 4 or 5 training
44 topics from the list submitted by each of the regions for future training.
45

46 CWMA 2018 Interim Meeting: A regulator requested that all NIST online training modules to be online and easily
47 accessible.

1 EDU-3 I Instructor Improvement

2 NIST OWM has provided legal metrology training for weights and measures jurisdictions and industry for many
3 years but does not have the resources to respond to the numerous training requests it receives. OWM has long
4 recognized that there are many individuals with extensive legal metrology experience who have the skills needed
5 to provide this type of training. OWM hopes to draw from this pool to develop trainers who can present schools
6 with NIST, thus leveraging NIST resources; providing more timely classes; and providing a way to more broadly
7 share the valuable expertise these individuals possess.

8
9 Several years ago, OWM renewed its efforts to develop trainers by providing a grant to the NCWM which is
10 intended to pay travel costs of individuals to travel within their regions to conduct training and to participate in
11 NIST training for trainers. This partnership has enabled NIST to bring in candidates for NIST-sponsored training
12 such as “train the trainer” classes and to participate in NIST technical training schools. Through an application
13 process, in collaboration with weights and measures directors and nominated training candidates, NIST has
14 identified a group of people who are now working with NIST to develop the knowledge, skills, and abilities to
15 work with NIST staff in presenting technical training schools. A number of candidates in the NIST Trainer
16 Program have already served as co-instructors for NIST technical training schools and have done an excellent
17 job. OWM sincerely appreciates the willingness of those trainers and their directors who have supported their
18 participation to devote time to making these seminars successful.

19
20 NIST training seminars on field inspection topics are only held a limited number of times each year. This poses
21 a challenge in sustaining regular interaction and involvement of NIST trainer candidates. NIST does not have
22 the resources to develop and sustain the development of all the trainers it has invited to participate in the NIST
23 trainer program activities and events held over the past several years; however, even if a candidate is not
24 designated to participate as an instructor in a NIST seminar, they and their jurisdictions can benefit from the
25 experience and the candidate can still provide valuable training in their jurisdiction and region.

26
27 A list of all people who have attended a NIST “Train the Trainer” class or associated event has been posted on
28 the NCWM website. Many people on this list have attended NIST “train the trainer” events and workshops but
29 have not served as co-instructors for NIST classes and, in some cases, have not attended NIST technical training
30 schools in the areas in which they are interested in serving as trainers. Conversely, there are people on this list
31 who have attended the workshops and NIST technical training seminars and have also served as co-instructors in
32 NIST training seminars. Because of the variations in experience levels of individuals on this list and because
33 OWM has not authorized anyone (external to NIST) to independently present “NIST” classes and is still refining
34 the program infrastructure, confusion has arisen in the weights and measures community regarding classes that
35 these individuals may present on their own. NIST and NCWM are considering how to best depict these listings
36 to reflect the status of the trainers listed such that confusion can be avoided in the future

37
38 OWM appreciates the strong support of the NCWM, the PDC, the volunteer trainers, and their administrators in
39 continuing to develop the NIST Trainer Program. OWM will continue to provide the Committee with updates on
40 its progress as well as continue to collaborate with and support the Committee in its work.

41
42 The Committee continues to hear comments from States expressing appreciation for the NCWM Professional
43 Certification Program and the NIST Training Program. The Committee also heard favorable comments about
44 the training materials and tools provided by NIST, including a video on testing retail motor-fuel dispensers
45 (RMFDs). As noted in Item 410-2, the NIST video is divided into segments focusing on specific parts of the
46 RMFD test procedure that can be used to supplement and enhance instructor-led training. The video can be
47 accessed through OWM’s home page or by going directly to the following link:
48 <http://www.nist.gov/pml/wmd/lmdg/training-materials.cfm>.

49
50 The Committee has reiterated multiple times in the past that the responsibility for training employees rests with
51 individual organizations (weights and measures jurisdictions and industry alike). While NIST and other training
52 providers offer excellent sources of training and training materials, organizations must develop and manage their
53 own training programs, including developing trainers; establishing individual development plans for employees;
54 and identifying strategies for continually assessing and responding to training needs. The Committee recognizes

1 that NIST OWM cannot possibly train all weights and measures inspectors in the country. The state and
2 municipal jurisdictions have ultimate responsibility for training and qualifying their personnel. To fulfill this
3 responsibility, jurisdictions should be making individual plans to maintain or bolster their training efforts. NIST
4 OWM should be viewed as one vital resource to support that effort. The Professional Development Committee is
5 another resource. The Committee has created and posted on its website, the “Body of Knowledge” to establish
6 uniform learning objectives for weights and measures professionals. In addition, the Committee has posted a
7 Model Field Training Program document on its website. This program outlines methods to evaluate and
8 document training and offers guidance on training new inspectors and taking steps to ensure their ongoing
9 development.

10
11 These initiatives require competent and qualified trainers and a centralized management plan within the
12 jurisdiction. The Committee is continuing to work, in partnership with NIST OWM, to identify the basic
13 competencies of those trainers and training managers so that jurisdictions can find the right people to manage
14 and deliver training internally. It’s not enough just to be technically competent in a subject area to be a good
15 trainer or to effectively manage a training program. It takes other tools, such as:

- 16 • ability to assess employee competence and training needs,
- 17 • ability to create learning materials from technical material,
- 18 • ability to use adult learning techniques adapted to individual and group needs,
- 19 • ability to plan training activities and find appropriate training venues,
- 20 • ability to find creative ways to deliver training with tight budgets, and
- 21 • ability to adapt the overall training program to best serve jurisdiction goals

22
23
24 In 2015 OWM developed a NIST Instructor Training Program Instructor Competency Assessment and Feedback
25 Instrument that can be used as a self-assessment tool by instructors and assist them in identifying and setting
26 goals to strengthen and develop their skills as trainers. Included in this assessment tool is a broad list of
27 competencies for trainers based on a model developed by the U.S. Department of Education (see http://www.pronet2000.org/CM/content_files/70.pdf for details). For the purposes of serving as a NIST OWM trainer, only a
28 subset of these competencies may be necessary, although some trainers participating in the NIST Trainer
29 Program may be required to master more of them to meet broader training responsibilities within their own
30 agencies. See past Committee reports for additional background.

31
32
33 As previously reported, NIST OWM is authorized by IACET to issue “Continuing Education Units” for certain
34 training seminars and, as part of this authorization, there are certain provisions that an instructor must follow to
35 meet these requirements. NIST Certificates and the accompanying CEUs can only be issued if these criteria are
36 met; this includes ensuring that the material is presented consistent with the learning objectives and interpretations
37 specified by NIST OWM and in the same time frame. OWM staff trainers have completed IACET training courses
38 and are familiar with the procedures that OWM has implemented to ensure compliance with IACET-related
39 requirements for NIST training courses. External trainers in the NIST Trainer Program must also understand these
40 provisions. OWM has presented several short webinars to help its external trainers obtain the necessary training
41 and will continue to seek opportunities to provide this training to those who have not yet completed it.

42 At the 2016 Annual Meeting, Ms. Butcher reported that NIST is making an additional \$100,000 grant to NCWM to
43 support travel and training events for the NIST Trainer program. OWM continues to work on formalizing the NIST
44 Trainer Program. At the 2017 Annual Meeting, Ms. Butcher updated the Committee on progress on “Instructor
45 Improvement” in the NIST Trainer Program. She noted that OWM is continuing to work on the infrastructure of
46 the program, including documenting:

- 47 • Procedures for Selection, Evaluation, and Feedback to Instructors
- 48 • Instrument - Instructor Competency Assessment and Feedback – Overall
 - 49 ○ Based on US Dept of Education model for overall development
- 50 • Instrument - Instructor Competency Assessment - specific courses
- 51 • Criteria for Developing Participants in NIST Instructor Training Program and Use of the NIST-NCWM
- 52 Training Grant
- 53 • Instructor Agreement
- 54

1 She noted that OWM information shared this information with NCWM Board of Directors at their meeting May
 2 2017 as a follow-up to discussions and a request at the Board's January 2017 Meeting. She noted that OWM is
 3 beginning to implement these tools with its external trainers and OWM has made continual adjustments to the
 4 assessment documents based on experience. For example, the instrument which is used to provide an overall
 5 assessment of a trainer's professional competencies can be used to help a trainer identify personal goals for
 6 improving their competencies as a trainer, including both those that NIST would require of its trainers and those
 7 that might be required of them in their own jurisdiction. However, the instrument proved overly complex for an
 8 individual learning event. Consequently, Georgia Harris (OWM) developed a scaled down version of the
 9 instrument that was tailored more toward individual learning events, but that still linked back to the overall
 10 competencies. This instrument has been used in at least two classes and a revised version will be used in courses
 11 coming up in fall 2017.

12 Ms. Butcher reported that 10 of OWM's 44 training sessions in 2016 included non-NIST instructors assisting in the
 13 NIST OWM classes. Travel for external trainers serving as co-instructors in these classes is funded using travel
 14 from a grant provided by NIST to NCWM. She expressed appreciation to NCWM for its continued assistance in
 15 administering the grant and helping make the process of getting the trainers to these courses as smooth as possible.

16 Ms. Butcher also reported that several instructor training webinars had been offered to external trainers, including
 17 webinars on Blooms Taxonomy; learning objectives; and the ADDIE model. She noted that one of NIST's external
 18 trainers audited a "Train-the-Trainer" course offered by the American Management Association and OWM is
 19 considering if this might be a course that could be used by prospective NIST instructors in their own personal
 20 development as trainers. Ms. Butcher noted that OWM is continuing to involve external trainers in its training
 21 efforts and has been increasing their responsibilities in these seminars. She emphasized the significant impact that
 22 the external trainers have had on the success of the NIST courses and expressed appreciation for the trainers who
 23 give of their time and expertise and the directors who allow the trainers time away to assist with these courses.

24 **Regional Association Comments:**

25 WWMA 2018 Annual Meeting: The WWMA Professional Development Committee heard no comments during
 26 the open hearings. The WWMA continues to support the ongoing efforts of the NIST/OWM Train the Trainer
 27 Program.
 28

29 NEWMA 2018 Interim Meeting: No comments received. The Committee both supports and would like to thank
 30 our NIST partners for their continued work on improving the skills of trainers.
 31

32 SWMA 2018 Annual Meeting: No comments received.
 33

34 CWMA 2018 Interim Meeting: No comments received.

35 **EDU-4 I Recommended Topics for Conference Training**

36 The Board of Directors has charged the Committee with recommending appropriate topics for the technical
 37 sessions at future annual meetings. The Board of Directors asks the PDC to review and prioritize possible
 38 presentation topics and to submit those to the NCWM Chairman. The Chairman will coordinate with NCWM
 39 staff to secure presenters.
 40

41 The following is a list of technical presentations made at the NCWM since 2009. Presentations given since 2010
 42 are available at www.ncwm.net/meetings/annual/archive.
 43

- 44 • Planning and Coordinating a National Market Place Survey (Ms. Rachelle Miller, WI 2017);
- 45 • The Life Cycle of Petroleum from Well to Retail (Mr. Prentiss Searles, API 2017);
- 46 • The United States Mint at Denver – Gold, Coins and Embezzlement (Mr. Thomas Fesing, 2016)
- 47 • Understanding Transportation Network Systems (Ms. Andrea Ambrose Lobato, Lyft and Mr. Bob O'
 48 Leary, Uber 2016)
- 49 • Regulatory Consideration for Legalized Marijuana (Ms. Julie Quinn, MN and Mr. Nick Brechun, CO 2016)

- 1 • Motor Oil Quality Violations (Mr. Tom Glenn, Petroleum Quality Institute of America, 2014);
- 2 • Making Sense of Electronic Receipts (Mr. Justin Hotard, Vice President and General Manager, NCR
- 3 Corporation, 2014);
- 4 • LNG & CNG Motor Fuel – A Technical Briefing from Industry (Mr. Doug Horne, President CVEF, Mr.
- 5 Zack Wester, Blu, Mr. Jeff Clarke, NGVA, 2014);
- 6 • Taximeter Technology Advancements (Mr. Matt Daus, International Association of Transportation
- 7 Regulators, 2013);
- 8 • Advanced Vehicles and Fuel Quality (Mr. John M Cabaniss, Jr., Association of Global Automakers, 2013);
- 9 • Economic Justification and Demonstrating Value of Weights and Measures (Mr. Tim Chesser, Arkansas
- 10 Bureau of Standards, 2012);
- 11 • Conducting Effective Marketplace Surveys and Investigations (Ms. Judy Cardin, Wisconsin Weights and
- 12 Measures, 2012);
- 13 • Public Relations and Customer Service as Regulators (Mr. Doug Deiman, Alaska Division of Measurement
- 14 Standards/ CVE, 2012);
- 15 • An Overview of Unit Pricing in the United States (Mr. David Sefcik, NIST OWM, 2011);
- 16 • Grocery Unit Pricing in Australia (Mr. Ian Jarratt, Queensland Consumers Association, 2011);
- 17 • Grocery Unit Pricing in Canada (Mr. Ian Jarratt, Queensland Consumers Association, 2011);
- 18 • The U.S. Hydrogen Measuring System: The Turning Point? (Ms. Kristin Macey, California Division of
- 19 Measurement Standards, 2011);
- 20 • Corrosion in Ultra Low Sulfur Diesel Underground Storage Systems (Mr. Prentiss Searles and Ms. Lorri
- 21 Gainawi, American Petroleum Institute, 2010);
- 22 • Risk-Based Inspection Schemes (Mr. Henry Oppermann, Weights and Measures Consulting, LLC, 2010);
- 23 • Diesel Exhaust Fluid (DEF) (Mr. Gordon Johnson, Gilbarco, Inc., and Mr. Randy Moses, Wayne, 2009);
- 24 • Fuel Volatility and Ethanol Blending (Mr. Jim McGetrick, BP Products, 2009);
- 25 • Investigative Techniques (Mr. Michael Cleary, Retired, 2009);
- 26

27 During open hearings at the 2016 Interim Meeting, the Committee heard a suggestion from Ms. Kristin Macey
28 (CA) for a training session on transportation network systems. Mr. Doug Musick (KS) commented that this type
29 of technology is showing up in applications other than just passenger transportation and suggested that training
30 in GPS-based measuring systems in general would be beneficial. He noted that his jurisdiction is encountering a
31 large number of GPS-based measuring systems being used in assessing charges for the sale and application of
32 crop fertilizers and other treatments and he noted that the monetary impact is significant.

33
34 The Committee also heard comments from Mr. Jim Pettinato (FMC), Chairman of the NTEP Software Sector,
35 who noted that training on issues related to inspection of software-based systems may be beneficial to weights
36 and measures jurisdictions. He noted that, with the current progress of proposals through the NCWM process,
37 the Sector is wrapping up its initial work and suggested that the Sector and its members might be able to assist in
38 training on legal metrology issues relative to software-based weighing and measuring systems. Ms. Julie Quinn
39 (MN) commented that this assistance might be particularly helpful in assisting weights and measures
40 jurisdictions in understanding and educating inspectors and service personnel on audit trails used in these
41 devices, and she noted that audit trail training is the most frequently requested training topic in her jurisdiction.

42
43 The Committee appreciates the input and ideas that it has received regarding suggested training topics. Based on
44 the comments received during its open hearings, comments from the fall 2015 regional association meetings,
45 past suggestions, and discussions during its Interim Meeting work sessions, the Committee proposes that the
46 BOD consider offering technical presentations on the following topics:

- 47 • Verifying Compliance of Software-Controlled Weighing and Measuring Systems
- 48 ○ This might include the verification of software versions, security, and other metrologically
- 49 significant issues
- 50 • Understanding Transportation Network Systems
- 51 • GPS-Based Measuring Systems Used in Applications Other Than Passenger Transport
- 52 • Vehicle-Tank Metering Systems “Flush Systems”
- 53 • Credit/Debit Card Skimmers
- 54

55 The Committee also discussed the audience that is typically present at NCWM Annual and Interim Meetings,
56 noting that inspectors and service personnel are not always able to participate in these meetings. The Committee
57 believes it would be beneficial not only to offer training on key issues such as those listed above at the NCWM

1 meetings, but to have the training made available at regional and state weights and measures association
 2 meetings where more inspectors and service personnel would be likely to attend. Some aspects of the training
 3 might need to be tailored more toward field inspection than weights and measures administration, but much of
 4 the content should be the same. The Committee would like to collaborate with regional weights and measures
 5 associations to suggest that similar training be provided at the regional level.
 6

7 At the 2016 NCWM Annual Meeting, the Committee suggested that technical training on safety programs be
 8 included at Regional and National Meetings, including an update provided by Julie Quinn at the 2016 Annual
 9 Meeting. The Committee received no additional suggestions or comments regarding proposed training topics.
 10

11 **Regional Association Comments:**

12 WWMA 2018 Annual Meeting: The WWMA Professional Development Committee heard the following comments
 13 during the open hearings:

- 14 • John Young (Yolo County, CA) recommended training related to the use of cellular phones used in
 15 commercial transactions as indicating devices, e.g. Amazon Go, EV charging, and Uber, etc.
- 16 • Kipp Blauer (NV) suggested training regarding new skimmer technology and communication with law
 17 enforcement agencies.
- 18 • Louis Straub (Fairbanks Scales) would like the PDC to consider that often the regional and national
 19 committee work sessions are held in conflict with the training seminars. The regional and national
 20 committee members and stakeholders are not able to attend the training seminars that are being offered.
 21 The field trip to the Magellan Pipeline at the NCWM Annual Meeting in Tulsa, OK. was well attended and
 22 these types of field trips might be a better alternative to the training seminars.
- 23 • Dick Suiter (Richard Suiter Consulting) suggested training related to the rental of electronic scooters using
 24 cell phones.
 25

26 NEWMA 2018 Interim Meeting: No specific recommendations for future training topics for the Annual Meetings
 27 were made. There were many positive comments regarding the field trip that took place at the Tulsa OK annual
 28 meeting and an openness to consider doing something similar going forward. The Committee supports alternative
 29 technical sessions such as field trips where appropriate.
 30

31 SWMA 2018 Annual Meeting: Don Onwiler (NCWM Executive Director) commented that we may want to receive
 32 from the group not only topics for conference training, but industry type tours like the one of the Magellan Terminal
 33 at the NCWM annual conference in Tulsa, OK. The Chairman received no other comments on this item.
 34

35 CWMA 2018 Interim Meeting: Regulators requested that technical training be given on Livestock Scales and
 36 Monorail Scales. They would also like to see 1-2 hour training course be given for (e) verification divisions and (d)
 37 divisions. Training was requested for digital density meters. There will be technical training on Retail Motor Fuel
 38 Meters given in Canton, OH on May 6-9th, 2019 during the CWMA Annual conference running concurrently with
 39 the conference. Chris Guay from Proctor & Gamble will also be providing some training on Packaging/Labeling at
 40 the CWMA conf on May 6-9th, 2019 in Canton, OH.

41 **PMT – PROGRAM MANAGEMENT**

42 **PMT-1 I Safety Awareness**

43 One of the goals of the PDC is to educate jurisdictions on safety issues and to provide resources to help them
 44 implement effective safety and health management programs. The Committee intends to use the safety page on the
 45 NCWM website (<https://www.ncwm.net/resource/safety>) as a place for states to share information and resources to
 46 help them address each of the major steps in creating and maintaining an effective safety program.

47 In July 2017, the Board of Directors created the Safety Task Group to create a safety tool kit to help weights and
 48 measures organizations create or improve their own safety programs. As of the 2018 annual meeting, the toolkit is
 49 nearly complete and should be posted soon on the NCWM website

1 At the 2018 annual meeting, the NCWM BOD decided to make the task group a permanent sub-committee
2 associated with the PDC. The newly formed Safety Awareness Subcommittee (SAS) will assume responsibility for:

- 3 • Maintaining and updating the safety toolkit
- 4 • Writing and deploying the NCWM annual safety survey, as well as reporting on the results each year
- 5 • Finding resources and/or developing weights-and-measures-focused materials relating to the top
- 6 hazards identified through the safety survey or through developing the toolkit
- 7 • Building a safety culture and developing safety leadership within the NCWM through participation on
- 8 SAS

9 The SAS is currently working to improve the annual safety survey by:

- 10 • Including questions about near-miss incidents and about incidents resulting in lost or restricted time over
- 11 multiple years
- 12 • Contacting counties and associate members to increase participation
- 13 • Writing an instruction guide to help participants gather the information they need before completing the
- 14 survey

15
16 The results of the 2018 survey were consistent with 2016 and 2017 results. Seven injuries were reported which
17 resulted in days-away or lost time. All incidents occurred in the field. Five of them were related to
18 lifting/bending/twisting. The other two were related to slips/trips and falls. Six of the resulting injuries were soft
19 tissue injuries (sprains, strains, torn joint ligaments, etc.) The remaining injury was a back/neck injury.

20 Although the survey does not currently ask about near-miss incidents, several jurisdictions have shared information
21 about near-miss incidents which resulted in no days-away or lost time. When the results of all three annual surveys
22 are compiled, the top four causes of near-misses are the same as the top four causes of DART incidents.

23 **Regional Association Comments:**

24 WWMA 2018 Annual Meeting: The WWMA Professional Development Committee heard no comments during the
25 open hearings. The WWMA PDC continues to support the importance of safety and the work being done by
26 NCWM.

27
28 NEWMA 2018 Interim Meeting: Walt Remmert (PA) volunteered to take a lead for NEWMA on training topics
29 including Safety. He stated that Julie Quinn might be utilized to assist with safety training. Pennsylvania paid for all
30 state W&M employees to attend the 10-hour OSHA class.

31
32 Michael Sikula (NEWMA Regional Safety Liaison) gave a detailed report on the concerns and issues related to
33 using 100-gallon provers to test gasoline meters. NY will be developing a Power Point presentation to assist in the
34 training of inspectors in NY on the hazards of testing these meters used for gasoline. The Committee and NEWMA
35 would like to thank Mr. Sikula for his continued contributions as the Regional Safety Liaison. The Committee
36 would like to thank Julie Quinn and the Safety Committee for their ongoing contributions to the Safety section of the
37 PDC. The Committee supports ongoing training and education on Safety Issues.

38
39 SWMA 2018 Annual Meeting: The Chairman received no comments on this item.

40
CWMA 2018 Interim Meeting: Julie Quinn (MN) gave an overview of the game (Luck of the Draw) which she will
present to the members on Wednesday Oct 17, 2018, reviewed the safety survey results and stated that property
damage will be added to the survey.

Mr. Gene Robertson, Mississippi | Committee Chair
Mr. Marc Paquette, Vermont | Member
Mr. Marco Mares, San Diego County, California | Member
Ms. Jean Kliethermes, Missouri | Member
Mr. Scott Ferguson, Michigan | Member
Mr. James Pettinato, FMC Technologies Measurement Solutions, Inc. | AMC Representative
Ms. Julie Quinn, Minnesota | Safety Liaison
Ms. Tina Butcher | NIST Liaison
Mr. Ross Andersen | Certification Coordinator

Professional Development Committee

