

## Report of the Professional Development Committee (PDC)

Cheryl Ayer, Committee Chair  
New Hampshire

### 400 INTRODUCTION

This is the report of the Professional Development Committee (PDC) (hereinafter referred to as the “Committee”) for the 100<sup>th</sup> Annual Meeting of the National Conference on Weights and Measures (NCWM) held in Philadelphia, PA, July 19 - 23, 2015. This report is based on the Interim Report offered in the NCWM Publication 16, “Committee Reports,” testimony at public hearings, comments received from the regional weights and measures associations and other parties, the addendum sheets issued at the Annual Meeting, and actions taken by the membership at the voting session of the Annual Meeting. The Informational items shown below were adopted as presented when this report was approved.

Table A identifies the agenda items by reference key, title of item, page number and the appendices by appendix designations. The acronyms for organizations and technical terms used throughout the agenda are identified in Table B. The first three digits of an item’s reference key are assigned from the Subject Series List. The status of each item contained in the report is designated as one of the following: **(D) Developing Item:** the Committee determined the 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; **(I) Informational Item:** the item is under consideration by the Committee but not proposed for Voting; **(V) Voting Item:** the Committee is making recommendations requiring a vote by the active members of NCWM; **(W) Withdrawn Item:** the item has been removed from consideration by the Committee.

Table C provides a summary of the results of the voting on the Committee’s items and the report in its entirety. 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. 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.

Proposed revisions to the handbook(s) are shown as follows: 1) deleted language is indicated with a **bold face font using strikeouts** (e.g., ~~this report~~), and 2) proposed new language is indicated with an **underscored bold faced font** (e.g., new items). When used in this report, the term “weight” means “mass”.

**Note:** The policy is to use metric units of measurement in all of its 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 U.S. customary units.

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**Subject Series List**

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**Table B  
Glossary of Acronyms and Terms**

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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 Association
		WWMA	Western Weights and Measures Association

**Table C**  
**Voting Table**

<i>Reference Key Number</i>	<i>House of State Representatives</i>		<i>House of Delegates</i>		<i>Results</i>
	<i>Yeas</i>	<i>Nays</i>	<i>Yeas</i>	<i>Nays</i>	
To accept the Report	Voice Vote				Adopted

**Details of All Items**  
*(In order by Reference Key)*

**410 EDUCATION**

**410-1 I Professional Certification Program**

Professional certifications are offered in many industries as a means of demonstrating competence in a particular field of expertise. Certification may be a means of qualifying an individual for employment or a higher pay grade within a profession. The NCWM Professional Certification Program provides confidence that an individual has a strong understanding of U.S weights and measures standards as adopted by NCWM and published in NIST Handbook 44, “Specifications, Tolarances, and Other Technical Requirements for Weighing and Measuring Devices,” NIST Handbook 130, “Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality,” and NIST Handbook 133, “Checking the Net Contents of Packaged Goods.”

Professional certification is available to NCWM members and non-members in the private sector and in government positions. Please note the person taking the test must be an NCWM member in order to take the exams for free.

Three new exams were deployed in 2015. These include Medium Capacity Scales, Large Capacity Scales, and Vehicle-Tank Meters. Mr. Ross Andersen, the NCWM Certification Coordinator will provide statistical analysis of test results at the 2016 NCWM Interim Meeting. The Committee thanks the subject matter experts who have invested their time in the successful completion of these exams. Their names are listed in the table below.

Vehicle Tank Meters	Medium Capacity Scales Large Capacity Scales
Conrad Brown, ME	Mark Buccelli, MN, Retired
Charles Carroll, MA	Jim Daggon, Rice lake Weighing
Gabe Frezzo, Industry, PA	Dennis Fox, Central Illinois Scale
Lewis Hutfles, KS	Nathan Gardner, OR
Paul Jordan, CA	Joe Grell, Rice Lake Weighing
Antony Joseph, NY	Roger Macey, CA, Retired
John Kirk, VA	Matthew Maiten, Santa Barbara, CA
Gary Kneissel, MN	Mike Mann, WA
Mike Mann, WA	Albie Michelson, WY, Retired
Albie Michelson, WY, Retired	John Pasko, WI
Ron Pierce, PA	Kevin Pfeiffer, VA
Gary Sassaman, Liquid Measures & Controls, PA	Doug Rudy, PA
Scott Simmons, CO	Mike Smith, NY
Mike Smith, NY	Richard Suiter, NE, NIST, Retired
Michael Swimm, ME	Courtney Ward, Quality Scales
Jared Williams, WI	
Ray Woolfolk, AK	
Jane Zulkiewicz, Barnstable, MA	

The next exams to be completed will be Liquefied Petroleum Gas (LPG) and Price Verification, followed by Mass Flow Meters, Packaging and Labeling, and Precision Scales. Work has begun on the LPG exam and should begin shortly on Price Verification. The PDC is still looking for additional Subject Matter Expert (SME) volunteers for both of these projects. Any interested parties should contact the Mr. Andersen. The SME volunteers are the real heart of the certification program. The successful creation of these exams is dependent on willing volunteers.

**Status of Current Tests:**

NCWM has issued 310 professional certificates from inception of the Professional Certification Program to September 30, 2014. Of the certificates issued, six have been issued to individuals in the private sector (three for small scales, two for package checking, and one for retail motor-fuel dispensers). The balance of the certificates has been issued to regulators in 30 different states.

**Number of Certificates NCWM has issue by 2014 Fiscal Year End (September 30<sup>th</sup>):**

	FY10-11	FY11-12	FY12-13	FY13-14
<b>Count in Year</b>	44	94	104	68
<b>Cugmulative</b>	44	138	242	310

**States with largest number of Certificates:**

State	Certificates	State	Certificates
Missouri	56	Maine	8
Minnesota	52	Massachusetts	8
Maryland	47	New York	8
Nebraska	26	Ohio	8
Washington	24	Virginia	8
California	21	Idaho	6
Mississippi	15	Wisconsin	6
Connecticut	14	Wyoming	6
Arkansas	11	Private Industry	6

The Committee is continually working to improve the exams and the exam experience. Our goal is to make sure the exams stay meaningful and current as handbook changes are made, and they include an annual review of the current exams by the Certification Coordinator. The Committee reported that a short entry survey is being added to each exam to capture meta-data on who is taking the exams. Examples of meta-data include the candidate's level of experience; whether the candidate is a regulatory official or a service agent and so forth. The questions are in an untimed, unscored portion of the exam. Personal data will not be used in any analysis using this information.

In order to obtain valuable feedback on the Certification Program, the Committee has begun work on an exit survey, which will be implemented using Survey Monkey. The questions on the survey will address the mechanics of taking the exam, preparation for taking the exam, and general feedback (e.g., How did the candidate react **to the content** of the exam, was it challenging, was it too easy, or did they feel the exam was fair?).

NCWM Director, Mr. Don Onwiler, challenged the Committee to look toward the future of the program and explore the following areas:

**Accreditation** – This would require meeting established standards as a certifying body.

**Proctoring Exams** – Should candidates be required to take exams in a state's weights and measures facility or through a private proctoring service?

**Examination Protocol** – Currently, candidates register for the exam and are permitted to make up to two attempts to pass the exam. If the candidate fails both attempts, he or she may reregister and get an additional two attempts. 1) Do we continue to allow two attempts for each registration fee? 2) Do we implement a mandatory waiting period for candidates who need to retake the exam after two failed attempts?

**Intermediate Exams** – Jurisdictions have expressed interest in using the NCWM exams in their registered service agent programs. Would it be beneficial to have exams that can serve as stepping stones toward reaching professional certification? The Committee will consider creating three exams: 1) basic measurement and use of NIST Handbook 44; 2) basic liquid measuring, and 3) basic weighing.

The Committee continues to hear from states that are interested in requiring professional certification for their registered service agents. Some states have expressed concern that service agents would not be able to pass the Professional Certification Exams. The Committee is challenged with either reducing the difficulty of the test for service agents or finding ways to better prepare the service agents to successfully pass the exams. In particular, can the states expect private service agencies to provide training to prepare their workers to pass the NCWM certification exams? What actions will the states with registered service programs have to undertake to ensure that these service agents are as qualified as state-trained officials to evaluate equipment for legal compliance?

At the 2015 Annual Meeting, the Committee met with the Board of Directors to discuss the creation of lower level exams for service agents. During the meeting, the Board encouraged the Committee to move forward with the development of Basic Competency Exams. The Committee had already discussed the idea of exams covering Basic Weighing and Basic Liquid Measuring. Each of these exams would have a NIST Handbook 44 component and a technical component for either Weighing or Liquid Measuring. The Committee recognizes this will require the development of new learning objectives for these exams. During open hearings, the Committee asked for feedback and guidance on the learning objectives.

The Committee heard comments from Mr. Brett Gurney (Utah). He wants to see separation between the exams for regulatory officials and service technicians. Mr. Jim Hewston (JA King) supports the work of the Committee noting that they have twelve service centers in eight states. He welcomes testing and wants to rise to the challenge.

During the 2015 Interim and Annual Meeting open hearings, the Committee heard from multiple jurisdictions regarding how they have used the professional certification exams to help develop their inspectors. The Committee heard from four of the top five states who use the program including: Maryland, Minnesota, Missouri, and Washington. Jurisdictions shared various strategies they use, including the following:

- promoting professional certification at all staffing levels;
- incorporating certification exams into job classification requirements;
- using collective success on the certification exams as a measure of the effectiveness of the jurisdiction's training program;
- retesting to maintain their proficiency; and
- identify and implement additional training.

Mr. Ron Hayes (Missouri) commented that in addition to preparing employees with technical training, they also coach their employees on successful test-taking strategies. For example, avoiding getting caught up on one question and watching the time limit. Mr. Hayes also provides an environment to his employees that is free from interruption or outside influences.

The Committee will work with NCWM Headquarters to provide hyperlinks in the exam announcement to the EPOs, handbooks, supplemental courses, and study aids, including modules. This will provide quick access to individuals taking the exam as well as to trainers. EPOs updated to 2015 NIST Handbook 44 requirements have been posted on the NIST website.

### **Regional Associations Comments:**

The WWMA supports the continued development of the certification testing program and encourages more people to take the exams. The WWMA strongly recommends the NCWM devise a way to give individual participants feedback in those areas (i.e., General, Administration, or Technical) where they scored the lowest, while still maintaining the integrity of the Professional Certification Program.

NEWMA encourages the national Committee to continue efforts toward the development of stepping stone exams. When a new weights and measures official is employed, individuals are not able to work on their own until they reach a certain level of competence. When service agents apply for registration, they are generally not prepared to pass the professional certification exam. Basic stepping stone exams will be more appropriate for initial registration of service agents and help to verify they understand certain requirements before they begin placing devices into service. These exams could also be utilized for new weights and measures officials as a measure of increased competence during probation.

At the 2015 CWMA Annual Meeting, the Committee heard reinforcing comments that the majority thinks service agents should have a separate test. When asked what that test should cover, the following suggestions were received:

- How to look up items in NIST Handbook 44;
- How to look up, understand, and use NTEP Certificates of Conformance;
- Understanding the difference between calibrating (placing in service) and testing for tolerance; and

- Understanding the different responsibilities of service agents and regulators.

A suggestion was made that the National PDC should solicit states for their service agent tests in order to determine whether there are other areas which should also be included in the body of knowledge that service agents should know. The CWMA PDC also recommends that service agents should know how to properly seal all classes of devices.

The SWMA heard comments from Mr. Stratt Pinagel, Walmart, acknowledging the importance of these exams in promoting uniformity in inspections. Mr. Pinagel asked how many states are requiring successful completion of these exams as a condition for employment of inspectors. Dr. Matt Curran asked whether there were any states who are working toward implementing this in the future. Several states indicated they already require this and several, including Florida, indicate an active interest in pursuing this. Mr. Tim Chesser (Arkansas) indicated that although Arkansas would like to implement a requirement for inspectors to take these exams, Arkansas, like some other states, have personnel regulations that may prevent them from making this a requirement at the present time. He noted, however, that Arkansas is considering requiring this for service companies. Mr. Lou Straub, Fairbanks, noted that the “passing” rate for some of the exams is rather low and commented that if weights and measures officials are having difficulty passing the exams, this may pose a problem for service personnel who are less familiar with basic weights and measures requirements. Mr. Straub also suggested distinct tests for weights and measures officials and service personnel. Mr. Chesser pointed out that in Arkansas service personnel are performing many of the same inspection and testing functions as field officials; therefore, it is important they have a full understanding of the requirements. Mr. Dale Saunders (Virginia), SWMA PDC Chairman, commented that with regard to the exam scores, successful completion of these exams indicates a level of professional proficiency, and it is important that inspectors be prepared and undergo adequate training prior to taking these exams. After hearing Mr. Saunders’ comments, Mr. Jerry Butler (North Carolina) asked questions about how jurisdictions go about this preparation. Mr. Saunders noted this preparation is the basic training required of any inspector along with increased emphasis on studying and comprehending the NIST Handbook 44 requirements.

#### **410-2 I Training**

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

At the 2014 Annual Meeting, the Committee announced the Model Field Training Program developed by a Subcommittee and chaired by Mr. Michael Cleary (California, retired), was available for use. To date, Mr. Cleary has given instruction on the use of the program to the WWMA and CWMA and is scheduled to give a presentation at the SWMA’s 2015 Annual Meeting. The Committee thanked the Associate Membership for sponsoring Mike’s presence at the regional meetings.

During the 2015 Annual Meeting, Mr. Cleary spoke about the training he provided at the regional meetings on the NCWM Model Field Training Program and stated his PowerPoint presentation from the CWMA meeting is available on the NCWM website at [http://www.ncwm.net/training/model\\_training](http://www.ncwm.net/training/model_training).

Mr. Cleary has received some positive feedback from regulators who have started using the Model Field Training Guide. The Committee hopes this guide will encourage jurisdictions that do not have an evaluation program in place to utilize this tool. As feedback has been received, minor changes have been made, and the updated document can be found under the training section of the NCWM website through the Training tab.

It is important to note that the combination of quality training and evaluation in a weights and measures program helps to ensure that jobs are done accurately and correctly. Again we thank Mr. Cleary, Subcommittee Chair, and all the Subcommittee members.

If you have any suggestions, recommendations, or you need support for successful implementation, please contact Mr. Cleary at (916) 483-8498 or by email at [mcleary55@sbcglobal.net](mailto:mcleary55@sbcglobal.net) or a member of the PDC.

A training video on retail motor-fuel dispensers was released by the NIST, Office of Weights & Measures. This video demonstrates and describes the minimum tests of a retail motor-fuel dispenser in accordance with NIST Handbook 44. It includes how to select and maintain a standard, wetting the standard, normal and slow flow tests, leveling, reading the meniscus, draining a test measure, and the anti-drain test. The video is available as a 14-minute video segment,

or it may be viewed in individual segments. The OWM will have a training video available on small capacity scales this year. OWM would like feedback on the training videos and input on training topics that jurisdictions would be interested in having available.

The Retail Motor Fuel Dispenser (RMFD) training video can be accessed from OWM’s home page at: <https://www.nist.gov/pml/weights-and-measures>. Select the “Legal Metrology Devices” link under “Programs.” On the “Legal Metrology Devices Program” page, click on “Training Materials” under “Related Links.” The NIST Handbook 44 Self-Study Course is also accessible on the “Training Materials” page. The PDC plans to provide links to these valuable training materials from the NCWM website under the “Training” tab.

**Regional Associations Comments:**

The WWMA supports the NCWM Model Field Training Program and encourages weights and measures jurisdictions to implement it. The WWMA conveys its gratitude to the NCWM work group headed by Mr. Cleary for developing the Model Field Training Program. This program provides the tools for the administrator and trainer to ensure that new inspectors are competent in all of the required basic skills needed to perform the function of an entry-level weights and measures official.

NEWMA would like to recognize the contributions made by the following agencies:

CONTRIBUTING AGENCY	CONTRIBUTION
NCWM	Training modules with uniform learning objectives
NCWM	Professional Certification Exam – Objectively measuring knowledge of the subject.
NIST, OWM	Train the Trainor Program
NIST, OWM	Training Course Materials
NIST, OWM	Training Videos and other Resources
STATES	Utilizing NCWM modules in training preparation
STATES	Utilizing NCWM certification exams to monitor employee progress
STATES	Sharing “trained” trainers with other states in the region

The NEWMA PDC heard remarks from Mr. Jerry Buendel (Washington) that many of the parts necessary to a national training program are coming together, and the program is just getting better and better.

SWMA heard a comment from Mr. Buendel that Mr. Cleary gave a very good presentation at the WWMA meeting on the Training Manual and suggested that Mr. Cleary be invited to give this presentation at the SWMA. Mr. Dale Saunders (Virginia, SWMA PDC Chairman) noted that Mr. Cleary was originally scheduled to give this presentation at the SWMA, but a schedule conflict prevented him from attending. Mr. Saunders reminded the SWMA that the PDC publications, including the manual, are available for viewing on the NCWM website.

**410-3 I Instructor Improvement**

NIST, OWM has provided legal metrology training for weights and measures jurisdictions and industry for many years but does not have the resources to respond to the numerous training requests it receives. NIST, OWM has long recognized that there are many individuals with extensive legal metrology experience who have the skills needed to provide this type of training, and in some cases, those individuals are already training within their own jurisdictions or regions. Drawing from this pool of individuals, NIST, OWM hopes to develop trainers who can present schools on behalf of NIST, thus leveraging NIST resources; providing access to NIST training on a timetable that can meet jurisdictions’ needs; and providing a way to more broadly share the valuable expertise these individuals possess.

Several years ago, NIST, OWM renewed its efforts to develop trainers by providing a grant to NCWM that is intended to pay travel costs of individuals to travel within their regions to conduct training and to participate in NIST training for trainers. This partnership has enabled NIST to bring in candidates for NIST-sponsored training such as “train the

trainer” classes and to participate in NIST technical training schools. Through an application process, in collaboration with weights and measures directors and nominated training candidates, NIST has identified a group of people who are now working with NIST to develop the knowledge, skills, and abilities to present specific technical schools on behalf of NIST. Candidates not only participate in “train the trainer” seminars, but also work with NIST, OWM staff to participate in technical training schools, assist in teaching seminars, and develop materials for use in NIST training schools.

The OWM is making progress on formalizing the NIST Instructor Training Program and expects to have formal criteria in place later in 2015. Key areas being addressed include:

- Instructor Competencies;
- Instructor Agreement;
- Feedback Mechanisms for Instructors; and
- Mentoring Plans.

The OWM is establishing a list of required “Instructor Competencies” for NIST, OWM trainers based on various models used in the adult training community and expects to finalize this list by fall 2015. OWM shared a preliminary list of competencies during the spring 2015 NIST Trainer Summit. Examples include:

- Technical knowledge (e.g., legal metrology expertise);
- Communication skills (e.g., writing, presentation, interpersonal skills);
- Consistency with NIST interpretations (e.g., presenting material consistent with other NIST instructors); and
- Knowledge and application of International Association for Continuing Education and Training (IACET) requirements.

NIST is authorized by IACET to issue “Continuing Education Units (CEUs),” and as part of this authorization, there are certain provisions that an instructor must follow in order to meet these requirements. NIST Certificates and the accompanying CEUs can only be issued if these criteria are met. OWM staff trainers have completed IACET training courses and are familiar with the procedures that OWM has implemented to ensure compliance with IACET-related requirements for NIST training courses. To ensure that external trainers in the NIST Trainer Program understand these provisions, OWM is planning to develop a series of short webinars that can be used to provide training to its external trainers.

In addition to refining the mechanisms used to collect feedback from students, NIST, OWM is looking for ways in which it can provide improved feedback to instructors on specific competency areas and assist them in identifying and setting goals to strengthen and develop their personal skills as trainers.

NIST training seminars on field inspection topics are held a limited number of times each year. This poses a challenge in sustaining regular interaction and involvement of NIST trainer candidates. NIST, OWM is considering how to ensure timely mentoring and continuity for individual instructors who will provide training on behalf of NIST. A number of candidates in the NIST Trainer Program have already served as co-instructors for NIST technical training schools and have done an excellent job. NIST, OWM sincerely appreciates the willingness of those trainers and their directors who have supported their participation to devote time to making these seminars successful.

A list of all people who have attended a “Train the Trainer” class has been posted on the NCWM website, whether or not they have worked with NIST as co-trainers or attended NIST technical training schools. The OWM has not certified anyone (external to NIST) as a “NIST Trainer” but looks forward to doing so once the structure of the Trainer Program is finalized and candidates have satisfied all requirements. At that point, a list of “NIST Trainers” will be posted along with the courses they are authorized to teach on behalf of NIST, OWM, and this list will be periodically updated as new trainers and technical areas are authorized. NIST does not have the resources to develop and sustain the development of all of the trainers it invites to participate in NIST trainer program activities and events; however, even if a candidate is not designated to present on behalf of NIST, they and their jurisdictions can benefit from the experience and the candidate can still provide valuable training in their jurisdiction and region.

NIST, OWM is also looking at ways to enhance and streamline its training and help prepare students *prior* to a training class. Students are currently required to complete a self-study course on NIST Handbook 44 prior to attending NIST device-related training seminars. NCWM has graciously agreed to offer an exam for this self-study course through the NCWM Certification Program system and is awaiting feedback from NIST on a beta version of the online exam. As an additional measure, NIST contracted with Mr. Henry Oppermann (W&M Consulting) who developed a Basic Measuring Course. NIST plans to offer this course as a self-study course and may require it as a prerequisite to participating in NIST seminars on measuring devices. NIST, OWM plans to develop a similar course for weighing devices.

NIST, OWM appreciates the strong support of NCWM, the PDC, the volunteer trainers, and their administrators in continuing to develop the NIST Trainer Program. OWM will continue to provide the Committee with updates on its progress.

The Committee continues to hear comments from states expressing appreciation for the NCWM Professional Certification Program and the NIST Training Program. The Committee also heard favorable comments about the training materials and tools provided by NIST, including a recent video on testing rRMFDs. As noted in Item 410-2, the NIST video is divided into segments focusing on specific parts of the RMFD test procedure that can be used to supplement and enhance instructor-led training. The video can be accessed through OWM's home page or by going directly to the following link:

**<https://www.nist.gov/pml/weights-and-measures/legal-metrology-devices/training-materials>**.

The Committee wants to reiterate that the responsibility for training employees rests with individual organizations (weights and measures jurisdictions and industry alike). While NIST and other training providers offer excellent sources of training and training materials, organizations must develop and manage their own training programs, including: developing trainers; establishing individual development plans for employees; and identifying strategies for continually assessing and responding to training needs.

The Committee recognizes that NIST, OWM cannot possibly train all of the weights and measures inspectors in the country. The state and municipal jurisdictions have ultimate responsibility for training and qualifying their personnel. To fulfill this responsibility, jurisdictions should be making individual plans to maintain or bolster their training efforts. NIST OWM should be viewed as one vital resource to support that effort. The Professional Development Committee is another resource. The Committee is creating, and posting on its website, the "Body of Knowledge" to establish uniform learning objectives for weights and measures professionals. In addition, the Committee has posted a Model Field Training Program document on its website. (See Item 410-2.) This program outlines methods to evaluate and document training and offers guidance on training new inspectors and taking steps to ensure their ongoing development.

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

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

### **Regional Associations Comments:**

The WWMA commends Ms. Carol Hockert (NIST, OWM) and her staff for offering such a beneficial course to state and local weights and measures jurisdictions. The list of participants who have completed the Train-the-Trainer course

is available on the NCWM website. The WWMA encourages all weights and measures jurisdictions to take advantage of this valuable resource.

At the 2015 CWMA Annual Meeting, Ohio and Minnesota both indicated the regional training provided by NIST-trained trainers have been very valuable to their programs.

#### **410-4 I Recommended Topics for Conference Training**

The Board of Directors has charged the Committee with recommending appropriate topics for the technical sessions at future Annual Meetings. The Board of Directors asked the PDC to review and prioritize possible presentation topics and to submit this to the NCWM Chairman. The Chairman will coordinate with NCWM staff to secure presenters and schedule the sessions.

To date, the Committee has received suggestions for the following topics:

- Succession Planning;
- Small Volume Provers (including operation, use, and interpretation of the data);
- Job Safety;
- CNG;
- Making Sense of Electronic Receipts and Electronics Record Laws;
- Training the Trainer in Adult Learning Techniques;
- Ethics for Weights & Measures Officials;
- Data Privacy Issues Faced by Weights & Measures Officials;
- Guidelines for Supplemental Declarations (recommended by PALS);
- Alternative Fuels Issues (Fuel Volatility, Ethanol Blending, and Biodiesel Blend);
- Ergonomics (including Proper Lifting Techniques, Back and Stress Techniques, and Office Ergonomics);
- Public Relations (specifically dealing with aggressive/angry people) (recommended by the SWMA);
- General Safety Issues (recommended by the WWMA);
- Defensive Driving (recommended by the WWMA);
- Administrative Civil Penalty Process (recommended by the WWMA);
- Price Verification (recommended by the WWMA);
- Customer Service (recommended by the WWMA);
- Moisture Loss;
- Documenting Investigations for Court Proceedings;
- Honing Presentation Skills;
- Emerging Issues;
- Implementing New RMFD Price Posting and Computing Capability Revisions (recommended by the WWMA);
- Fundamentals of the National Type Evaluation Program (recommended by the WWMA);
- Electric Vehicles: Commercial Devices, Method of Sale, Advertising and Labeling (recommended by the WWMA);
- Understanding the International Weights and Measures Standards Development System (recommended by the WWMA); and

- Crane Operation and Safety (recommended by NEWMA).

Of these topics, the PDC recommends the following in order of priority:

- 1) Building a Safety Plan for your Organization;
- 2) Small Volume Provers (including operation, use, and interpretation of the data);
- 3) Electric Vehicles: an overview of the test procedure and test equipment; and
- 4) Public Relations: establishing and promoting good customer relations.

The following is a list of technical presentations made at NCWM since 2009. Presentations given since 2010 are available at [www.ncwm.net/meetings/annual/archive](http://www.ncwm.net/meetings/annual/archive).

- Motor Oil Quality Violations (Mr. Tom Glenn, Petroleum Quality Institute of America, 2014);
- Making Sense of Electronic Receipts (Mr. Justin Hotard, Vice President and General Manager, NCR Corporation, 2014);
- LNG & CNG Motor Fuel – A Technical Briefing from Industry (Mr. Doug Horne, President CVEF, Mr. Zack Wester, Blu, Mr. Jeff Clarke, NGVA, 2014);
- Taximeter Technology Advancements (Mr. Matt Daus, International Association of Transportation Regulators, 2013);
- Advanced Vehicles and Fuel Quality (Mr. John M Cabaniss, Jr., Association of Global Automakers, 2013);
- Economic Justification and Demonstrating Value of Weights and Measures (Mr. Tim Chesser, Arkansas Bureau of Standards, 2012);
- Conducting Effective Marketplace Surveys and Investigations (Ms. Judy Cardin, Wisconsin Weights and Measures, 2012);
- Public Relations and Customer Service as Regulators (Mr. Doug Deiman, Alaska Division of Measurement Standards/CVE, 2012);
- An Overview of Unit Pricing in the United States (Mr. David Sefcik, NIST OWM, 2011);
- Grocery Unit Pricing in Australia (Mr. Ian Jarratt, Queensland Consumers Association, 2011);
- Grocery Unit Pricing in Canada (Mr. Ian Jarratt, Queensland Consumers Association, 2011);
- The U.S. Hydrogen Measuring System: The Turning Point? (Ms. Kristin Macey, California Division of Measurement Standards, 2011);
- Corrosion in Ultra Low Sulfur Diesel Underground Storage Systems (Mr. Prentiss Searles and Ms. Lorri Grainawi, American Petroleum Institute, 2010);
- Risk-Based Inspection Schemes (Mr. Henry Oppermann, Weights and Measures Consulting, LLC, 2010);
- Diesel Exhaust Fluid (DEF) (Mr. Gordon Johnson, Gilbarco, Inc., and Mr. Randy Moses, Wayne, 2009);
- Fuel Volatility and Ethanol Blending (Mr. Jim McGetrick, BP Products, 2009);
- Investigative Techniques (Mr. Michael Cleary, Retired, 2009);
- Automatic Temperature Compensation (ATC) Field Test Procedures (Mr. Don Onwiler, Chair ATC Steering Committee, 2008);
- Elements of an Effective Safety and Health Program (Mr. Dan Whipple, OHST Vermont Department of Labor, 2008);
- Analyzing Temperature Compensation Data (Mr. Henry Oppermann, NIST, OWM, and Mr. Steven Malone, Nebraska Division of Weights and Measures, 2007);

- The Great Temperature Compensation Debate (Mr. Ross Andersen, New York Bureau of Weights and Measures, 2007); and
- NIST Handbook 44, Scale Code Tare Changes (Mr. Steve Cook, NIST OWM, XXXX DATE).

**Regional Associations Comments:**

WWMA recommends adding the following topic to the conference training list:

- Small Volume Provers Operation, Use, and Interpretation of the Data.

At the SWMA Annual Meeting, Mr. Dale Saunders, SWMA PDC Chairman, indicated that the NCWM PDC is looking for input from the SWMA on training topics of interest. He asked for people to provide comments to the SWMA PDC. He also indicated he is considering sending out a brief survey to the SWMA members on possible topics to forward to the NCWM PDC.

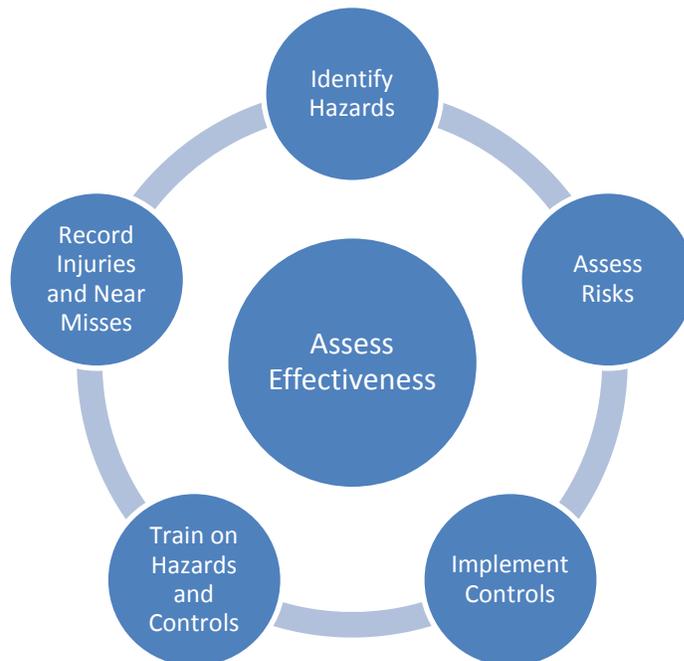
NEWMA recommends training on:

- “Job Safety” (recommendations for protecting employees and minimizing risks); and
- “CNG”

**420 PROGRAM MANAGEMENT**

**420-1 I Safety Awareness**

One of the goals of the PDC is to make a concerted effort to address and educate jurisdictions on safety awareness. It is important for us to open up dialog with the regions on safety awareness and know how to mitigate or eliminate safety issues. The Committee intends to use the safety page on the NCWM website (<https://www.ncwm.net/resource/safety>) as a place for states to share information and resources to help them address each of the major steps in creating and maintaining an effective safety program.



Sharing reports of incidents and near-misses can be one way for agencies to identify hazards, which they might otherwise overlook. Committee members Mr. Doug Killingsworth (Georgia) and Ms. Julie Quinn (Minnesota) have volunteered to work with the regional safety liaisons and other interested parties in compiling incident reports in a

systematic way to make them available on the safety page of the NCWM website. Please contact them if you are interested in assisting with this effort.

Other potential items for future inclusion on the safety page include links to resources on:

- OSHA consultation services;
- Job hazard analysis;
- Field level hazard analysis;
- Hierarchies of hazard control; and
- Safety training resources.

Each safety program is unique to its organization. Each agency is responsible for designing, implementing, and maintaining its own safety program. Resources provided on the web page are intended only to assist agencies as they develop and improve their own safety programs. Safety is not only first; it is first, last, and always. The work of maintaining and improving a safety program never ends.

Currently the safety page houses the list of regional safety liaisons and an archive of past safety articles. During the 2015 Annual Meeting, Mr. Ken Ramsurg (Maryland) advised the Committee that Elizabeth Koncki (Maryland) is the new Safety Liaison for the SWMA. The Committee wishes to thank the people listed below for their contributions.

### **Regional Safety Liaisons:**

#### **Central Weights and Measures Association (CWMA):**

Ms. Julie Quinn, Minnesota Weights and Measures Division

#### **Northeastern Weights and Measures Association (NEWMA):**

Mr. Michael Sikula, New York Bureau of Weights and Measures

#### **Southern Weights and Measures Association (SWMA):**

Ms. Elizabeth Koncki, Maryland Department of Agriculture

#### **Western Weights and Measures Association (WWMA):**

Mr. Brett Gurney, Utah Department of Agriculture and Food

### NCWM Newsletter Safety Article Contributors:

Ms. Julie Quinn (Minnesota): *Making Annual Safety Training Fun, 2014 Issue 2*

Mr. Mike Sikula (New York): *Emergency Preparedness – Gas Stations with Transfer Switches, 2014 Issue 3*

Ms. Elizabeth Koncki (Maryland): *Driving While Towing a Trailer, 2015 Issue 1*

Mr. Brett Gurney (Utah): *Don't Be a Statistic: Watch for Workplace Hazards, 2015 Issue 2*

Mr. Doug Rathbun (Illinois): *Defensive Driving, 2015 Issue 3*

The Committee asks for suggestions for safety articles that people would like to see in future newsletters and/or safety issues that need to be addressed immediately. The Committee reminds regional associations to check the submission deadlines for their upcoming article assignments. E-mail all articles to the NCWM headquarters at [info@ncwm.net](mailto:info@ncwm.net).

Issue	Article Source	Article Deadline
Issue 3: September 2015	CWMA	August 14, 2015
Issue 1: February 2016	NEWMA	January 15, 2016
Issue 2: May 2016	SWMA	April 15, 2016
Issue 3: September 2016	WWMA	August 15, 2016
Issue 1: February 2017	CWMA	February 17, 2017

**Regional Associations Comments:**

WWMA encourages weights and measures officials to submit safety reports and issues to their Regional Safety Liaison. The WWMA also commends Mr. Bret Gurney, Western Regional Safety Liaison, for his timely safety article submitted to the NCWM newsletter on “Controlling the Risk of Solitary Workers.”

CWMA 2014 Interim Meeting (Missouri): An incident was reported where a compressed natural gas (CNG) test vessel became a rocket after springing a leak near the valve during gravimetric testing. Missouri also reported an incident where both the diesel and gasoline discharge hoses on their RMFd testing units caught fire because of a short in the pump that caused it to seek ground through the discharge hoses.

CWMA Safety Liaison, Julie Quinn is going to take the incident list generated at the last two meetings and survey the CWMA states on whether they have:

- experienced the hazards identified on the lists (to get a sense of how common they are); and
- addressed these identified hazards through engineering solutions, personal protective equipment, policies, training, or other methods to prevent future injuries incidents.

SWMA heard from Mr. Ken Ramsburg (Maryland) indicating that Ms. Elizabeth Koncki (Maryland) is replacing Dr. Matt Curran (Florida) as the SWMA’s Regional Safety Liaison. The SWMA’s contribution to the newsletter was last due in January 2015; the next contribution is due in April 2016. If members are interested in any specific safety-related topics, please contact Mrs. Koncki.

NEWMA recommends providing safety videos on the NCWM website. An example of a basic safety issue is correct lifting techniques to avoid injury. NEWMA members agree that safety measures increase inspector confidence and demonstrate that management is mindful of individual safety and wellbeing.

**420-2 I PDC Publication**

The Professional Certification Exam Modules and the Body of Knowledge are available to all individuals, whether they are NCWM members or not. These documents may be accessed through the “Professional Certification” tab.

The Model Field Training Program documents are available to all individuals and may be accessed through the “Training” tab. Additional training documents and videos are available under the same tab. Trainers are encouraged to use these documents and to periodically check the website for updates.

Administrative documents describing the Professional Certification Program are only available to members under the “Professional Certification” tab.

Annual 2015 Meeting: The Committee proposed to drop this item from the PDC Agenda. All Committee materials are available electronically from the NCWM website

**Regional Associations Comments:**

The WWMA commends NCWM for its work on improving the accessibility to publications on its webpage.

At the SWMA Annual Meeting, Mr. Dale Saunders, PDC Chair, reminded the SWMA that the PDC publications are available for viewing on the NCWM website and encourages members to access them.

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Ms. Cheryl Ayer, New Hampshire | Committee Chair  
Ms. Angela Godwin, Ventura County, California | Member  
Mr. Stacy Carlsen, Marin County, California | Member  
Ms. Julie Quinn, Minnesota | Member  
Mr. Doug Killingsworth, Georgia | Member  
Mr. Richard Shipman, Rice Lake Weighing Systems | Associate Membership Representative  
Ms. Tina Butcher | NIST Liaison  
Mr. Ross Andersen | Certification Coordinator

**Professional Development Committee**

## Appendix A

### Safety Awareness Presentation

We all share safety program requirements. Most of us don't have the funding for industrial hygienists. Can we pool our resources and experiences so we do not have to reinvent the wheel? We have been sharing incident reports in a sporadic way but can we start cooperating on the other aspects of our programs?

- Identify hazards
  - Through incident reports
  - Through OSHA consultation
  - Through Hazard Assessments (Works well in facilities under your control)
  - Through Field Level Hazard Assessments (Requires field staff to be trained)
    - Can anyone share their FLHA checklists?
- Analyze Hazards
  - OSHA's Focus Four (responsible for 90% of all deaths and injuries)
    - Falls
    - Electrocutation
    - Struck by
    - Crushes/Caught between
  - Risk assessment grids
- Control hazards
  - Eliminate
  - Engineering solutions
  - Personal protective Equipment
  - Policies (Behavior Modification)
- Communicate hazards to Staff (Education)
  - Initial Training
    - ERTK
    - Driver Safety
    - Field Level Hazard Assessments
    - MSHA
    - Respiratory
    - Overhead cranes and hoist inspection

- Fire extinguisher
- Annual Training
  - ERTK
  - MSHA
  - Respiratory