

## Professional Development Committee (PDC) 2024 Interim Meeting Agenda

Mr. Ethan Bogren, Committee Chair  
Westchester County, New York

### INTRODUCTION

The PD Committee 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 *Handbook 44* and *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) NCWM Chairman or, in their absence, NCWM 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 table. 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.*

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**Subject Series List**


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Education .....	EDU Series
Program Management.....	PMT Series
Other Items.....	OTH Series

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**Table A**  
**Table of Contents**


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<b>Reference Key</b>	<b>Title of Item</b>	<b>PDC Page</b>
<b>EDU – EDUCATION</b>		<b>397</b>
EDU-1 I	Professional Certification Program .....	397
EDU-2 I	Training.....	401
EDU-3 I	Instructor Improvement.....	406
EDU-4 I	Recommended Topics for Conference Training .....	408
<b>PMT – PROGRAM MANAGEMENT</b>		<b>409</b>
PMT-1 I	Safety Awareness .....	409
PMT-2 I	Skimmer Education Task Group .....	412

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**Appendices**


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A	EDU-2: Summary of NIST OWM Training Conducted in 2019 .....	A375
B	EDU-2: NIST OWM Training - Future Plans .....	B377

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


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<b>Acronym</b>	<b>Term</b>	<b>Acronym</b>	<b>Term</b>
CWMA	Central Weights and Measures Association	OWM	Office of Weights and Measures
NCWM	National Conference on Weights and Measures	PDC	Professional Development Committee
NEWMA	Northeastern Weights and Measures Association	SWMA	Southern Weights and Measures Association
NIST	National Institute of Standards and Technology	WWMA	Western Weights and Measures Association
SETG	Skimmer Education Task Group		

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

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**EDU – EDUCATION**

**EDU-1 I Professional Certification Program**

The NCWM offers nine professional certification exams and two basic competency exams. The certification exams include Retail Motor Fuel Dispensers, Vehicle-Tank Meters, Small Capacity Scales, Medium Capacity Scales, Large Capacity Scales, Precision Scales, LPG and Anhydrous Ammonia, Price Verification and Basic Package Checking. Reporting on the Precision Scales exam begins this year. The competency exams include Basic Weighing Devices and Basic Liquid-Measuring Devices. Professional certifications must be renewed every five years and NCWM notifies candidates whose certificates have expired.

Proctoring was initiated as a first step towards accreditation of the certification program. Each organization is required to register the proctors they intended to use. Proctor qualifications are different for basic competency exams and professional certification exams so two lists of proctors are maintained. To eliminate conflicts of interest, proctors for professional certification exams must not be immediate supervisors of the candidate. Virtual proctoring was initiated in May 2021 and offered at no cost to members through the end of December 2021.

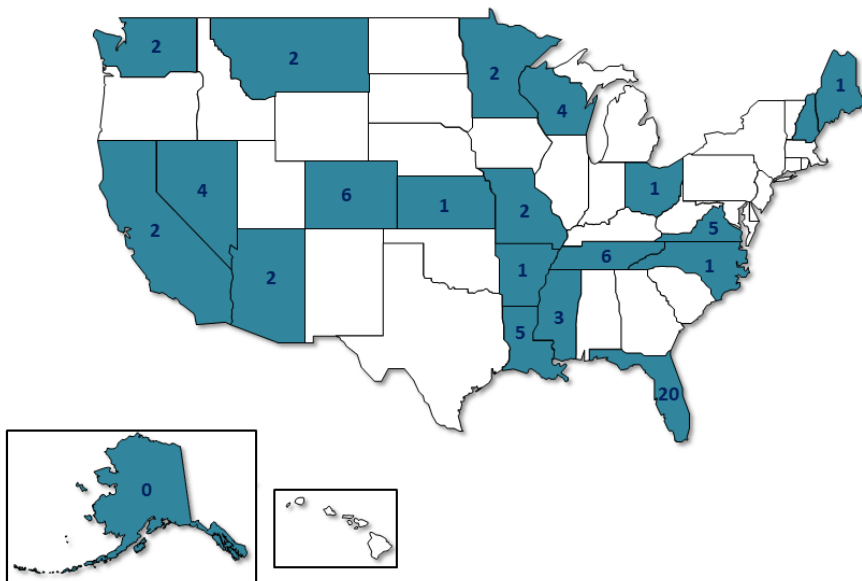
The requirements for proctors are posted on the NCWM website at <https://www.ncwm.com/proctoring>. Guidance for virtual proctoring can be found on the same webpage and more detailed information, including a helpful YouTube video on preparing for proctoring can be found on the ProctorU website at <https://support.proctoru.com/hc/en-us/articles/360043565051-Exam-Day-What-to-Expect->.

**Number of States with Proctors and number of Proctors. (As of November 2021)**

	Professional Certification		Basic Certification	
	States	Proctors	States	Proctors
FY 17-18	7	17	10	39
FY 18-19	11	28	14	57
FY 19-20	16	37	18	70
FY 20-21	17	41	19	73
FY 21-22	19	44	20	78

1 **Proctors per state – Basic Competency Exams:**

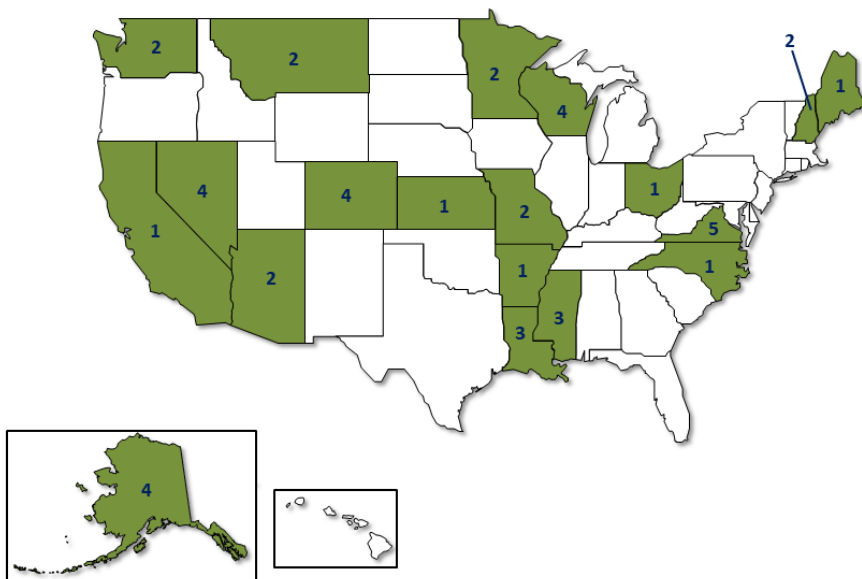
**Distribution of Certified Proctors per State: Basic Competency Exams**  
Updated: November 2022



2

3 **Proctors per state – Professional Certification Exams:**

**Distribution of Certified Proctors per State: Professional Certification Exams**  
Updated: November 2022



4

The table below shows the number of virtual and in-person proctored tests completed in FY 21-22.

	In-person	Virtual
Professional Certification	84	8
Basic Competency Certification	50	5

#### Status of Current Tests

The NCWM has issued 1267 professional certificates since program inception through September 30, 2021. Of the certificates issued, fifteen have been issued to individuals in the private sector. There has been a significant decline in participation in the program. It appears that the decline coincides with the requirement to proctor exams and the pandemic. Some of the certificates have reached their 5-year expiration and certificate holders will need to seek recertification.

#### NCWM Professional Certificates

The table below shows the number of certificates awarded over the past ten years and the cumulative total since program inception.

	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
<b>Certificates Awarded</b>	105	62	198	140	142	257	53	56	60	56
<b>Cumulative</b>	243	305	503	643	785	1042	1095	1151	1211	1267

The table below shows the states using the professional certification program and the number of certificates earned since program inception and includes expired certificates. The Committee applauds these states and encourages increased use of the certification program.

State	Certificates	State	Certificates	State	Certificates
Minnesota	153	Arizona	28	Wyoming	7
Missouri	143	Nevada	28	Arkansas	6
Louisiana	109	Maine	26	Delaware	4
Wisconsin	96	New Mexico	25	Michigan	3
Maryland	79	New York	19	South Dakota	3
Virginia	70	Colorado	18	Montana	2
Alaska	57	Connecticut	15	Oregon	2

Mississippi	56	Private	15	Tennessee	2
North Carolina	56	Ohio	14	New Hampshire	1
Washington	50	Idaho	11	West Virginia	1
Kansas	46	Massachusetts	11		
California	41	Pennsylvania	8		
Nebraska	33	Vermont	8		

# 1 NCWM Basic Competency Certificates

2 The table below shows the number of basic competency certificates awarded since program inception.

	<b>FY 17-18</b>	<b>FY 18-19</b>	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>Cumulative</b>
<b>Basic - Measuring</b>	0	40	14	5	7	66
<b>Basic - Weighing</b>	1	30	11	12	9	63
<b>Total Awarded</b>	1	70	25	17	16	129

3

4 The table below shows those states with individuals holding a basic competency certificate. The Committee applauds  
5 these states and encourages increased use of the certification program nationwide

<b>State</b>	<b>Certificates</b>	<b>State</b>	<b>Certificates</b>
Louisiana	59	Nevada	2
Tennessee	42	Nebraska	2
Alaska	7	Arkansas	1
Colorado	5	Kansas	1
Private	1	Montana	1
Florida	3		

6

# 7 NCWM Meeting Comments:

8 NCWM 2023 Interim Meeting: During the 2023 Interim Meeting an updated presentation was provided by Jerry  
9 Buendel, (Exam Coordinator). Mahesh Albuquerque (CO) thanked Jerry and the committee for the work done on  
10 advancing the certification program and appreciated the extension to the service organizations. He also suggested we  
11 consider general industry as a potential source of input for the development of exams. Scott Simmons (CO) echoed  
12 Mahesh's comments and feels they have benefitted greatly from the program and having these credentials lends weight  
13 to the department. One issue they have encountered is that their proctors aren't typically full-time and may not be  
14 fully familiar with NCWM and our processes for testing. Also, the online process via Proctor U resulted in issues due  
15 to a required plug-in not being able to be installed on individual's government computers due to departmental IT  
16 policy, so a home computer had to be used. Also, the process did not seem particularly user-friendly. Additionally,  
17 some of the forms were not compatible with the version of the Office suite on the computer in use. Scott would like  
18 to see the limitations on proctoring by individuals in chain-of-command be relaxed to allow proctoring by certified  
19 proctors within the organization. David Deroche (LA) testified that the time for taking the test might be too short, and  
20 that the expanding handbook makes it difficult to complete the test within the time allotted. He asked how these time  
21 limits are being determined. Also, he indicated that the lack of feedback after testing was not particularly helpful

especially if the test taker failed. Jerry responded to the test time question by indicating that most of those that pass complete the test well before time expires, and not many timeouts occur. Ivan Hankins (IA) referred the body to the online versions of field training manuals covering various sections of HB44 that could be used in place of a hard copy or at least be used as a training resource for inspectors. Brent Ricks (MT) followed up and thanked Ivan for the training materials mentioned above. Montana is troubled by non-resident personnel coming into service national chain devices etc. and finds the certification program useful to control this. Brent feels we're on the right track with the certification program. Doug Musick (KS) feels like the bar may be being set too high for some of the target audience e.g., service companies. (Not the test itself, the process.) Ray Woolfolk (Alaska) stated Alaska was having difficulty with arranging proctors, and echoed Scott's suggestion of allowing proctors from within the organization. He also indicated that they are pleased with the exam content. Vince Wolpert (AZ) likes the exams however, proctoring is an issue. Long travel times to get to a proctor makes the online option a valuable new approach. Also, cross-certification between states is still something he'd like to see. David Deroche (LA) returned to the microphone to question the content that may not be applicable to their state but is included in the test along with the pertinent material. More resources to prepare or learn HB44 material would be helpful. Greg Vander Platts (MN) echoed that proctoring is a bit of a challenge still. Joe Smith (WI) echoed proctoring is a challenge and it would be better to allow W&M staff to act as proctors even if they are in the same department. Tim Chesser (AR) echoed Scott Simmons suggestion for internal proctoring.

In the work session, the Committee discussed allowing employees from within the Weights and Measures authority to qualify as proctors for both the professional certification and the basic competency exams. The PDC recommends the BOD consider allowing this moving forward. Also, the PDC will work to resolve the concerns related to the limited feedback on failed test questions provided by the current process.

2023 Annual Meeting: Jerry Buendel (Retired), Professional Certification Program coordinator, gave an update on the professional certification program. He discussed the new exams for Registered Service Agents (RSAs) coming online this year, as well as the proctoring requirement adopted in 2018, and the new proctoring options that have been made available within the program. Tim Chesser (AR) thanked the subject matter experts who participated in the test development and recognized the effort. He also asked whether the RSAs passing the test would be given something (e.g. a hard copy of a certification letter) to prove that they had passed an exam.

#### **Regional Association Comments:**

CWMA 2023 Interim Meeting: Greg Vanderplaats, Minnesota, Proctoring policy for professional certification exams has changed and is posted on NCWM website. Now allowing Proctors within the program as long as there is no conflict of interest. Mike Harrington, Iowa. Iowa is happy with the changes to the policy and their program will now be participating. Greg Vanderplaats, Minnesota, Jerry Buendel working to use the state specific exams for RSA testing. RSA tests for HB 44, RFMD, Retail Scales are written and in testing.

The committee recommends this as an Informational Item.

WWMA 2023 Annual Meeting: Mahesh Albuquerque (Division of Oil and Public Safety, CO) – Proctor recommendation was approved by NCWM BOD and implemented. Don Onwiler has sent an email about agency proctors to all states. The WWMA PDC applauds this change.

The committee recommends this as an informational item.

SWMA 2023 Annual Meeting: The PDC heard no comments on this item and recommends the item remain an informational item.

NEWMA 2023 Interim Meeting: During the 2023 NEWMA Interim meeting an update was provided by Marc Paquette (Vermont). During the update changes in proctoring requirements and RSA Exams were discussed. Cheryl Ayer (New Hampshire) expressed her appreciation for the revamp on proctoring requirements.

The committee recommends this as and informational item.

#### **EDU-2 I Training**

The purpose of this item is to share best practices and approaches to training in response to the broad training needs

1 of weights and measures jurisdictions and to serve as a link to various training materials on the web.

2 At the 2023 Interim Meeting, Mrs. Tina Butcher (NIST OWM) provided the following “Summary of NIST OWM  
3 Training Conducted in 2022.” Mrs. Butcher also provided an update on plans for OWM training in 2023 and other  
4 work underway at NIST to assist weights and measures jurisdictions and industry representatives with legal metrology  
5 training.

<b>Summary of NIST OWM Training Conducted in 2022</b>			
<b>Area/Course Name</b>	<b>Start Date</b>	<b>Location</b>	<b>No. of Students</b>
<b>Laboratory Metrology</b>			
Fundamentals of Metrology GAP Interim (at RMAPs)	3/31/22 & 5/19/22	RMAPs	6
Advanced Mass Seminar (Rev 2015)	7/11/22	Gaithersburg, MD	6
Fundamentals of Metrology (3 sessions)	1/31/22, 6/27/22, 8/22/22	Gaithersburg, MD	19
Mass Metrology Seminar (3 sessions)	2/28/22, 4/25/22, 8/1/22	Gaithersburg, MD	15
Volume Metrology Seminars (4 sessions)	2/7/22, 2/14/22, 5/9/22, 8/29/22	Gaithersburg, MD	16
<b>Regional Measurement Assurance Programs (RMAPs)</b>			
SEMAP	03/28/22	Frankfort, KY	25
WRAP	05/16/22	Sparks, NV	21
NEMAP	06/13/22	Avenel, NJ	32
SWAP	09/12/22	Las Cruces, NM	25
MidMAP	09/26/22	Madison, WI	22
<b>Webinars</b>			
Basic Uncertainty Concepts	3/17/22	Web-based	9
Contract Review	6/23/22	Web-based	7
Document Control and Record Keeping	4/14/22	Web-based	13
Fundamentals of Metrology - Overview (2 sessions)	3/15/22 & 5/24/22	Web-based	34
Internal Auditing Best Practices	2/24/22	Web-based	6
Software Verification and Validation	7/28/22	Web-based	7
State Laboratory Annual Submission Process	7/7/22	Web-based	54
<b>Metric</b>			
Info Session – Metric Education Resources (2 sessions)	2/10/22	Web-based	8
	7/21/22	Web-based	6
Info Session – Metric Estimation (2 sessions)	2/17/22	Web-based	4
	7/28/22	Web-based	5
Measurement System Basics – SI and US Customary Units for Regulatory Officials	3/2/22	Webinar	25
<b>Laws and Regulations</b>			
<b>Packaging &amp; Price Verification</b>			
Handbook 130 – Examination Procedure for Price Verification (3 Sessions)	1/4/22; 4/5/22; 9/1/22	Web-based	106
Handbook 130 – Overview of the Uniform Packaging and Labeling Regulation (3 Sessions)	1/20/22; 4/13/22; 8/30/22	Web-based	110
Handbook 133 – How to Test Animal Bedding (3 sessions)	1/5/22; 4/6/22; 8/30/22	Web-based	49
Handbook 133 – Overview of Handbook 133 (3 sessions)	1/27/22; 4/21/22; 8/31/22	Web-based	107
Weights and Measures Inspections – Evidence, Search and Seizure, and Due Process (3 sessions)	1/25/22; 4/20/22; 8/29/22	Web-based	79



LPG (Propane) -Verifying the Net Contents of 20 lb Cylinders (Part 1) (3 sessions)	1/19/22; 4/12/22; 9/7/22	Web-based	155
<b>Legal Metrology Devices</b>			
No training seminars were offered in 2021.	--	--	--

The following includes a summary of training-related activities in each NIST OWM Program along with an update on some of OWM's general work in developing and providing legal metrology training.

#### **Laboratory Metrology and Metric Program**

The following summarizes activities in the NIST OWM Laboratory Metrology Program:

**General.** The Laboratory Metrology Program training classes conducted in 2022 included both virtual and in-person formats, with a total of 28 sessions and 339 students.

**Regional Metrology Association Training.** All Regional Measurement Assurance Program (RMAP) training was conducted in an in-person format in 2022. The Laboratory Metrology Program found that holding the Regional Measurement Assurance Program (RMAP) training events in person was beneficial and essential in filling training gaps from the last two years of virtual training.

OWM held an abbreviated Fundamentals of Metrology Training at the end of several of the in-person RMAPs in 2022. This training was specially designed for metrologists who took NIST's online Fundamentals Course in 2020 and 2021 and intended to fill the gap between the online course and NIST's regular in-person course.

**Laboratory Metrology Program Training in 2022.** In-person training events resumed on-campus in 2022 and were very instrumental to many labs being able to have continuity of operations and to continue to serve their State weights and measures programs. All lab metrology in-person seminars and webinars consisted of hands-on application of training material. Class size and other restrictions will continue to be adjusted to comply with local safety conditions and policies, with preference being given to metrologists from state and local weights and measures programs.

**Lab Recognition and Workload.** OWM currently recognizes 44 state labs as having "Metrological Traceability" according to NIST Handbook 143 (2019). Twenty of those labs are also Accredited by NVLAP. Forty-five labs are applying for "Recognition" this year.

The bi-annual Workload Survey through NCSLI is getting started with data expected to be provided by March 2023.

**Metric Program.** The Metric Program, which is now located in the Laboratory Metrology Program, conducted five webinars and web-based sessions in 2022. This training covered three different topic areas presented in five sessions and included 48 students.

#### **Laws and Legal Metrology Devices Program**

**General.** The development and delivery of field inspection training in the areas of laws and regulations and legal metrology devices have slowed due to staff shortages and an increased workload for the technical staff. However, OWM hopes to resume work on some of the projects already in progress and to develop more training products and services moving forward.

**Webinars.** The Laws Program conducted 18 webinars on topics related to "Laws and Regulations" in 2022, this included 6 different topic areas as outlined in the tables above, with 18 sessions and 606 students. These courses were offered on a frequency based on the level of demand, but no less than once per quarter during the year.

No webinars were presented by the Legal Metrology Devices Program in 2022. Several new webinars/courses are in various stages of development:

- Reference Scale Verification for Gravimetric Testing
- Electric Vehicle Fueling Systems Inspection and Testing
- Retail Motor-Fuel Dispensers Inspection and Testing
- Conducting Witness Tests

**Informal Learning Resources.** OWM plans to expand available “informal learning” tools targeted toward field inspection topics. This includes adding to existing informal learning resources currently offered by NIST such as study guides, examination procedure outlines, field manuals, and videos as well as exploring the development of new tools such as checklists and frequently asked questions to assist in field inspections.

The Laws and Legal Metrology Devices Program had also planned to implement “information hour” informal educational sessions in 2022, patterned after those used in the past by the Laboratory Metrology Program. These sessions will focus on presenting information on a select topic, followed by a question-and-answer session. Topics will be selected from questions OWM has received from officials and other stakeholders on various field inspection issues and new inspection areas in the marketplace. OWM will also solicit ideas from the community on future topics.

Although this work was delayed in 2022 due to the restrictions noted earlier, Rick Harshman and Lisa Warfield are now working on the development of a format and timeline for these sessions and have identified a number of potential topics to address. They expect to begin scheduling the first of these sessions in the late spring or early summer 2023.

### **General – OWM Training**

Mrs. Butcher summarized the following statistics for OWM’s 2021 training as follows:

- 31 classes presented in-person and virtually on topics related to laboratory metrology, metric, and laws and regulations
- 993 total students
- Training included regulators and industry and an increased interest from international participants

Mrs. Butcher provided an overview of OWM’s training looking forward in 2023. She shared that no “in-person” classes are presently being scheduled for field inspection training. OWM will explore options for future classes, which it expects to include a mixture of in-person, hybrid, and virtual training as staffing and conditions permit.

As shared last year in her 2021 report, Mrs. Butcher stated that OWM has no intention of eliminating, virtual training options. OWM has reached a significantly larger number of students with virtual training and students who have never had the opportunity to attend NIST OWM training in the past have been able to access training because of the virtual format. It is clear that virtual training also offers the advantages of flexibility and reduced costs to learners as well as trainers and makes offering multiple sessions of a given course more practical.

OWM plans to expand virtual training to include additional topics on field inspection, particularly on device-related topics and will actively explore “hybrid” and “blended” learning options. This might include options such as:

- Some students attend virtually and some attend in-person;
- Some portions of class are presented in an in-person format (with smaller size classes) and some portions of class are presented virtually (with larger class sizes); and
- Exploring “synchronous” and “asynchronous” formats enhanced with pre-recorded lecture and/or video.

These options will likely continue even after OWM returns to in-person training.

OWM will also be experimenting with available technology and tools to best incorporate elements of “hands-on” in its field inspection training, recognizing the importance of that “hands-on” or “experiential learning” component for field inspection work.

Mrs. Butcher has previously shared plans at NIST to create a “Virtual Training Studio.” She reported this project is well underway with significant monetary and facility support from OWM’s parent operating unit, the Physical Measurement Laboratory. This will include outfitting a virtual training space in NIST OWM offices for delivering virtual training and hosting web-based meetings such as work groups and standards development sessions. This “studio” will result in a mid-level space for:

- Conducting virtual training;
- Conducting live demonstrations;
- Video recording and editing;
- Enhancing livestream capabilities;
- Hosting and/or participating in virtual meetings as individuals or as a group; and
- Enable high levels of interactivity with off-site participants with capability to concurrently, view remote participants.

OWM has purchased considerable equipment and begun work with a contractor to renovate the space. This studio will also enhance OWM’s virtual training events and its capability to develop training videos.

In early 2022, OWM was pleased to add an Audio-Visual Production Specialist (a position that is shared with another NIST division) to its staff to oversee the activities targeted for development in the Virtual Studio project and to further extend OWM’s ability to provide virtual training events as well as enhance both virtual and in-person training. OWM’s new AV specialist, Rich Montgomery, comes to OWM with extensive experience in video development and production and has already developed several short videos for OWM. Mr. Montgomery attended the 2023 NCWM Interim Meeting where he created a video of a technical panel discussion and interviewed attendees to gather footage for a video highlighting attendees’ experience at the conference. OWM training developers are also beginning to take advantage of Mr. Montgomery’s talents and expertise and have started collaborating with him on the development of a couple of short videos focused on field inspection topics.

Mrs. Butcher reported that OWM trainers are actively participating in their own professional development through participation in a variety of training courses and activities focused on enhancing their abilities in training design, development, and delivery, with particular emphasis on virtual and hybrid training venues.

Mrs. Butcher will continue to provide updates to the Committee and NCWM members at future meetings about available OWM training and future training plans. In the meantime, she reminded those interested in OWM training, to periodically consult the OWM Calendar of Events for upcoming training at the following link on the OWM website:

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

NIST OWM looks forward to continued work with the weights and measures community to develop and implement training to assist weights and measures officials and service personnel in their continued professional development.

#### **NCWM Meeting Comments:**

NCWM 2023 Interim Meeting: During the 2023 Interim Meeting open hearings, an updated presentation was given by Tina Butcher (NIST OWM) on NIST training activity. The updates will appear in Publication 16. Doug Rathbun (IL) wanted to thank NIST for all they do to advance training among the membership. Mahesh Albuquerque (CO) commended the NIST office of W&M for their efforts and is excited about some of the new materials that are being developed. Mahesh looks forward to continuing to work with NIST on training. Ivan Hankins (IA) expressed appreciation for the online material and virtual options that have become available. Jim Pettinato (PDC AMC representative) reminded the body that there are funds available from the AMC designated for assisting jurisdictions in providing training, and can be used to cover costs such as instructor travel, materials, etc. The application can be found on the NCWM website.

2023 Annual Meeting: Tina Butcher (NIST OWM) gave an update on the training programs provided by OWM. She highlighted the work being done to provide more streamlined access to the most relevant and desired OWM educational resources, initially based on data collected from state directors via a survey. This effort will be ongoing and will reflect the needs of the target audience. Cheryl Ayer (NH) expressed excitement about the new options for training being developed by PDC and NIST. She encourages sharing of learning programs, procedures, and practices among state programs and that directors listserv information may be another source of information that could contribute to content of an FAQ.

#### **Regional Association Comments:**

CWMA 2023 Interim Meeting: Mike Harrington, Iowa took NIST online classes and found them to be very helpful. Requests more on demand video training. Helpful to justify job class increase.

Steve Peter, Wisconsin, Developing Training videos in Wisconsin. As they move into editing those videos they will be reaching out for feedback. Service agents have been requesting where to find training materials.

Wes Sommerfield, Iowa, took online LP Cylinder training and found it very helpful.

Greg Vanderplaats, Minnesota, NCWM exam have their modules and objectives posted on the NCWM website for each exam and NIST has HB 44 self-study available.

Greg Vanderplaats, Minnesota. Goal for NCWM RSA exam is to have one test that other states may recognize.

The committee recommends this as an informational item.

WWMA 2023 Annual Meeting: WWMA PDC Chair, Miland Kofford (Utah) recognized Dr. Katrice Lippa (NIST OWM) for her update earlier in the meeting introductions and thanked NIST OWM for the presentation.

The committee recommends this as an informational item.

SWMA 2023 Annual Meeting: The PDC heard no comments on this item and recommends the item remain an informational item.

NEWMA 2023 Interim Meeting: During the NEWMA Interim Meeting Ethan Bogren (Westchester Co., NY) the NCWM PDC Chair discussed correspondence sent to the NCWM PDC members by Michael Cleary (California, Retired) that suggested that the NCWM Field Training Manuals be prioritized and catalogued for accessibility. Jason Flint (New Jersey) suggested that the PDC oversee the development of future Field Training Manuals. Mr. Flint suggested subjects for training manuals include automatic bulk weighing systems and multi dimension measuring devices. Several regulators expressed support for the development of more Field Training Manuals. Cheryl Ayer (New Hampshire) noted that the manuals are live digital documents that can be edited by NCWM when necessary.

The committee recommends this as an informational item.

#### **EDU-3 I Instructor Improvement**

The Committee has reiterated multiple times in the past that the responsibility for the training employee 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 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 has created and posted 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. This program outlines methods to evaluate and document training and offers guidance on training new inspectors and taking steps to ensure their ongoing development.

NIST OWM has also provided ongoing contributions to assist the community in the development of instructors. 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. 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. OWM hopes to continue to draw from this pool to develop trainers who can present schools with NIST, thus leveraging NIST resources; providing more timely classes; and providing a way to more broadly share the valuable expertise these individuals possess. In the past ten years, NIST OWM has taken on more field inspection classes than it would otherwise be able to do because of the co-instructors drawn from its current pool of trainers.

Mrs. Tina Butcher (NIST OWM) has regularly updated the Committee on instructor development work by NIST OWM.

See the Committee's past reports for background information on this item along with other details on available tools for trainer development and NIST OWM's efforts and partnership with the NCWM to continue this work.

#### **NCWM Meeting Comments:**

NCWM 2023 Interim Meeting: No comments were heard from the floor. Mrs. Tina Butcher, NIST OWM, reported that OWM has not undertaken any new work in this area in 2022. As reported in the past few years, Mrs. Butcher emphasized that OWM sincerely appreciates the time and resources committed by these trainers and their organizations in support of this important partnership and the expertise that these trainers bring to NIST training events and looks forward to continued collaboration. OWM will continue to provide the Committee with updates on its progress as well as continue to collaborate with and support the Committee in its work.

2023 Annual Meeting: Tina Butcher (NIST OWM) gave a brief update on this item; the topic of 'blended' training programs which use a blend of training delivery methods, e.g., combining virtual training mechanisms such as instructor-led webinars, on demand or self-study with in-person hands-on content. This may also be a path to revive the 'training the trainer' initiative and grow outreach. Kurt Floren (LA County, CA) stood to express appreciation for Tina's commitment, effort and constant drive to improve our community and people and recognized the value of her contributions, and wished her well in retirement. Tina received a standing ovation for her contributions to NCWM throughout her career at NIST OWM.

#### **Regional Association Comments:**

CWMA 2023 Interim Meeting: No Comments

The committee recommends this as an informational item.

WWMA 2023 Annual Meeting: David Aguayo (San Luis Obispo County, CA) – Appreciates and supports efforts for online training that provides consistency with current staff turnover rates.

Kevin Schnepf (Division of Measurement Standards, CA) – Appreciates the challenge to find qualified trainers for NIST training. Recommends focusing on identifying SMEs as trainers in regions and develop talent.

Miland Kofford (UT) – Appreciates NIST for online training. Recognizes jurisdictions are responsible for training but appreciates the help and guidance from NIST.

The committee recommends this as an informational item.

SWMA 2023 Annual Meeting: The PDC heard no comments on this item and recommends the item remain an informational item.

NEWMA 2023 Interim Meeting: During the 2023 NEWMA Interim Meeting Cheryl Ayer (New Hampshire) suggested that NIST Web based training sessions be more accessible. Ms. Ayer cited an instance where she became aware of an upcoming webinar she thought would be of benefit to a member of her staff, however the inspector could not participate because the registration had closed. Ms. Ayer suggested that Webinars be recorded and then made available for review for those that were not able to participate or for future reference. Marc Paquette (Vermont) suggested a Train the Trainer type program for metrologists.

The committee recommends this as an informational item.

## **EDU-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 asks the PDC to review and prioritize possible presentation topics and to submit those to the NCWM Chairman. The Chairman will coordinate with NCWM staff to secure presenters.

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

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

At the Interim Meeting 2019 the following suggestions from the floor for additional topics were received:

- Investigative reporting

- D.E.F. Testing requirements, special considerations (handling, safety, equipment)
- Differentiation between weight classifier and normal rounding scales
- Organizing/publishing existing training materials

#### **NCWM Meeting Comments:**

NCWM 2023 Interim Meeting: No comments were heard from the floor.

2023 Annual Meeting: Ethan Bogren (Westchester County, NY) gave a quick update on the topic of conference training. Doug Rathbun (IL) mentioned a successful school and safety training initiatives. Ivan Hankins (IA) pointed out the LPG study as a success from the training perspective. The study provided a forum to communicate the issues discovered and how to overcome them. He also thanked David Sefcik (NIST OWM) for the training provided in conjunction with this study.

#### **Regional Association Comments:**

CWMA 2023 Interim Meeting: Mike Harrington, Iowa, wants to continue having professional development programs at conferences. This helps with justification for expense of going to conferences.

The committee recommends this as an informational item.

WWMA 2023 Annual Meeting: Kurt Floren (Los Angeles County, CA) – Recommends comprehensive e-commerce training. He commented on the need for uniform training to avoid possible inconsistencies. Consistency will be critical in regulating this marketplace.

Mahesh Albuquerque (Division of Oil and Public Safety, CO) – BOD discussed training for future regional meetings. Reach out to Roxanne Chepsongol (NM) or anyone on the BOD with recommended training topics.

Matt Douglas (Division of Measurement Standards, CA) - Recommends training on the Roberts Rule of Order. He feels it would be beneficial to the committees. He also believes a training portion for committee chairs would help them know their boundaries. What questions they can ask and what their role is.

The committee recommends this as an informational item.

SWMA 2023 Annual Meeting: The PDC heard no comments on this item and recommends the item remain an informational item.

NEWMA 2023 Interim Meeting: During the 2023 NEWMA Interim Meeting Cheryl Ayer (New Hampshire) suggested gravimetric testing procedures for bulk motor oils as a training topic. Jason Flint (New Jersey) agreed with Ms. Ayer and suggested that gravimetric testing procedures could also be applied to DEF. Several other regulators agreed that conference training on gravimetric testing procedures for motor oil and DEF is needed.

The committee recommends this as an informational item.

### **PMT – PROGRAM MANAGEMENT**

#### **PMT-1 I Safety Awareness**

One of the goals of the PDC is to educate jurisdictions on safety issues and to provide resources to help them implement effective safety and health management programs. The Committee intends to use the safety page at [www.newwm.com/safety](http://www.newwm.com/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.

In July 2017, the Board of Directors created the Safety Task Group to create a safety tool kit to help weights and measures organizations create or improve their own safety programs. The toolkit is complete and is posted on the NCWM website at [www.ncwm.com/safety](http://www.ncwm.com/safety).

At the 2018 Annual Meeting, the NCWM BOD decided to make the task group a permanent subcommittee associated with the PDC. The newly formed Safety Subcommittee will assume responsibility for:

- Maintaining and updating the safety toolkit.
- Writing and deploying the NCWM annual safety survey, as well as reporting on the results each year.
- Finding resources and/or developing weights-and-measures-focused materials relating to the top hazards identified through the safety survey or through developing the toolkit.
- Building a safety culture and developing safety leadership within the NCWM through participation on the Safety Subcommittee

The Safety Subcommittee is currently working to improve the annual safety survey by:

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

The Committee expresses appreciation to the members of the Safety Subcommittee for their willingness to volunteer for this important work.

Safety Subcommittee Members		
Chair	John Bell	Missouri
Public Sector	Jason Flint	New Jersey
Private Sector	Tisha Arriaga	Marathon Petroleum, LLC
Private Sector	Bill Callaway	Crompco
Private Sector	Remy Cano	Northwest Tank & Environmental Services
Private Sector	Robert LaGasse	Mulch and Soil Council

The NCWM safety page houses the list of regional safety liaisons and an archive of past safety articles.

**Regional Safety Liaisons:**

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

Mr. John Bell, Missouri Department of Agriculture

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

Mr. Michael Peeler, New Jersey Weights and Measures

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

Mr. Robert Huff, Delaware Department of Agriculture

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

Mr. Remy Cano, Northwest Tank & Environmental Services

Each region is responsible for providing a safety article for the NCWM newsletter according to the following schedule:



Safety Article Schedule		
Issue Date	Source	Article Deadline
Issue 2 (May 2023)	NEWMA	April 15, 2023
Issue 3 (September 2023)	CWMA	August 13, 2023
Issue 1 (February 2024)	WWMA	January 15, 2024
Issue 2 (May 2024)	SWMA	April 15, 2024

The Committee would like to thank the following individuals for their contributions since the 2020 Annual Meeting:

- *The Psychology of Safety* – Mr. Ron Armstrong (NWTES)
- *Back to Your Health* – Ms. Elizabeth Koncki (MD)
- *Engineering Controls* – Mr. Mike Sikula (NY)
- *Avoid Hostile Encounters in the Field* – Mr. Mike Sikula (NY)
- *Who's Got Your Back?* – Mr. Ron Armstrong (NWTES)
- *Cannabis Facility Safety Awareness* – Mr. John Bell (MO)

#### NCWM Meeting Comments:

NCWM 2023 Interim Meeting: No comments were heard from the floor.

**2023 Annual Meeting: Paul Floyd (LA) gave a brief overview on the Safety Committee status. No comments were heard during the open hearing.**

#### Regional Association Comments:

CWMA 2023 Interim Meeting: No Comments

The committee recommends this as an informational item.

WWMA 2023 Annual Meeting: Kevin Schnepp (Division of Measurement Standards, CA) – Recommends EVFS safety training.

David Aguayo (San Luis Obispo County, CA) – With staffing changes, the safety page on the NCWM site is utilized often. Supports a regular safety newsletter or updates. Recommends a new NCWM safety survey with published results.

David Sefcik (NIST OWM) – Suggests WWMA partner with industry to ask for safety training and guidance at the session on Wednesday (September 20, 2023).

The committee recommends this as an informational item.

SWMA 2023 Annual Meeting: The PDC heard no comments on this item and recommends the item remain an informational item.

NEWMA 2023 Interim Meeting: During the 2023 NEWMA Interim Meeting Jason Flint (New Jersey) recommended that NEWMA Safety Liaison Mike Peeler (New Jersey) replace him on the NCWM Safety Subcommittee. Jim Willis (New York) commented that he would like to see a repository to document accidents and safety issues. These shared experiences will help promote a culture of safety awareness. Cheryl Ayer (New Hampshire) noted that since Julie Quinn (Minnesota, Retired) completed her tenure as chair of the Safety Subcommittee the committee has not conducted any safety surveys. This information was found to be useful in targeting areas of need related to safety awareness. In addition Ms. Ayer suggested a repository of safety resources be compiled. She noted that on the NCWM website OSHA is the only resource currently listed.

The committee recommends this as an informational item.

**PMT-2 I Skimmer Education Task Group**

This is a new agenda item added to the report by the PDC after the Publication 15 printing deadline.

The Skimmer Education Task Group (SETG) held its first meeting during the 2021 Annual Meeting. The SETG is made up of industry members, regulatory officials, and interested parties for the purpose of continuing work identified by the S&T Committee's Credit Card Skimmer Task Group. Under the guidance of the Professional Development Committee (PDC), the task group will develop education and outreach strategies and gather or produce materials to educate regulatory officials, fuel retailers, industry members and consumers on payment card information theft via skimming devices. The SETG will provide information and organize education sessions to share recommendations for safety procedures and technologies to better protect consumer payment information and reduce the risk of skimmer installation at fuel dispensers. The SETG will continue in force until the task group Chair and the PDC Chair agree the work has been completed. The task group may also be disbanded by vote of the NCWM Board of Directors. The task group will meet via electronic media, teleconferences, face-to-face meetings, or other means available.

Co-Chair, Ms. Paige Anderson (NACS) provided a report of their meeting held on January 10, 2021 during the open hearing. Following is a summary of her remarks.

The SETG expressed their appreciation for the leadership and assistance of Mr. Hal Prince (FL), the NCWM board and staff, Mr. David Aguayo (San Luis Obispo Co., CA) and the PDC in helping to create the Task Group. Many of the Task Group members worked on the policy item before the Specifications and Tolerances (S&T) Committee to establish user requirements on fuel dispensers to prevent skimming, and during that time recognized the importance of education and training.

The SETG's mission to educate the membership and bring together all stakeholders in sharing information on skimming. The SETG recognizes that technology changes include the devices used to steal debit and credit card information, the technology to prevent these thefts, and the criminals become more organized and sophisticated. NCWM provides a powerful platform to bring together all stakeholders – state officials, law enforcement, manufacturers, service companies, retailers, security providers and consumers.

In organizing the SETG, it was decided that having co-chairs representing both regulatory officials and the private sector demonstrates partnership in combatting skimming and the criminal organizations.

The SETG held their first meeting on Sunday, January 10<sup>th</sup>, 2021 via web conference. The number of attendees who attended the meeting was remarkable. It clearly demonstrated that there is a significant need for knowledge on this issue. The SETG discussed and finalized their 2021 goals. The two goals are to:

1. Establish a library of resources for the public on the NCWM website. The resources will consist of videos, articles, reports, checklists, contact information, best practices, and other information. The SETG recognized that there may be some sensitive or proprietary data that should not be put on the public-facing website but may be shared with the membership or a targeted group of the membership. Alternative distribution methods would be determined and used in these cases. Communicating the availability and location of these resources to the membership and beyond is an important element of the strategy and project.
2. Host presentations and briefings from subject matter experts at future NCWM meetings. The SETG is planning to provide such a briefing at the Annual meeting in July 2021. The SETG is looking at 3 key constituencies to provide presentations:
  - o Law enforcement - overview of the landscape of activity on skimming (e.g., U.S. Secret Service)
  - o Private sector security experts - to share what they are seeing and describe the types of technology being used by the criminals and methods used to combat skimming
  - o Retail/industry - updates on the transition to EMV card readers, etc.

The SETG is also working to identify other key stakeholders to either present or to join the SETG. These key stakeholders included financial institutions such as banks, credit card providers, and credit unions.

- 1 The SETG welcomes volunteers and encourages participation from all members. If you or your staff are interested,  
2 contact members of the PDC or the NCWM staff.

Skimmer Education Task Group Members		
Co-Chair	Vacant	
Co-Chair	Vacant	
Public Sector	Bobby Fletcher	Louisiana
Public Sector	John Larkin	California
Public Sector	Mike Harrington	Iowa
Public Sector	Vince Wolpert	Arizona
Public Sector	Scott Borse	PEI
Public Sector	Owen Dewitt	FlintLoc Technologies, LLC
Public Sector	Brent Price	Gilbarco, Inc.
Public Sector	Mike Roach	Invenco Payment Systems
Public Sector	Scott Schober	Berkley Varitronics Systems

### 3 NCWM Meeting Comments:

- 4 NCWM 2023 Interim Meeting: No comments were heard from the floor.

5 2023 Annual Meeting: The PDC Chair pointed out that the task group has been idle of late primarily due to lack of  
6 leadership (chairperson position is vacant); the question was asked if this task group should be disbanded. Kurt Floren  
7 (LA County, CA) mentioned that the scope of 'skimmers' is broader now, and includes theft of EBT benefits using  
8 skimmers on POS systems in all markets. The issue may not be as prevalent at RMFDs specifically, but it is still a  
9 concern. Stephen Benjamin (NC) would like to see continuation and communication on this topic. Vince Wolpert  
10 (AZ) suggested we expand the scope of the task group to consider ways to identify/prevent facilitation of fraud by  
11 other means as well. This sentiment was echoed by Matt Douglas (CA), who also noted that they have seen an increase  
12 in fraud via altered meter pulse transmissions. The PDC believes there is value in maintaining this task group and is  
13 looking for a volunteer to lead the group in continuation of this work, and would also ask the Conference to consider  
14 expanding the scope of the task group to include some of these other sources of fraud identified by the membership.

### 15 Regional Association Comments:

- 16 CWMA 2023 Interim Meeting: Brenda Geist, Kansas, Kansas does not want to see this task group disbanded. States  
17 need to be proactive on skimmers.

18 Mike Harrington, Iowa, Skimmer Education Task Group needs a chair. Anyone interested can let Mike Harrington  
19 know and he will pass it on to the Task Group.

20 The committee recommends this as an informational item.

- 21 WWMA 2023 Annual Meeting: Matt Douglas (Division of Measurement Standards, CA) – Supports and appreciates  
22 the Task Group, recommends adding pulser technology and include other devices that facilitate fraud.

23 Gene Robertson (NCWM Chair) – Named Alan Walker (FL) as co-chair of Task Group and suggests name change to  
24 include more types of fraud activities.

25 Vince Wolpert (AZ) – Arizona recently saw pulser and multiple skimmer devices causing losses over \$3,000. The  
26 technology is advancing, and AZ is seeing different designs. Supports expanding the group to include all types of  
27 fraud.

28 Kevin Schnepf (Division of Measurement Standards, CA) – Echoes Vince Wolpert's comments and recommends  
29 name change to "Fraud Prevention Task Group".

30 Kurt Floren (Los Angeles County, CA) – Reiterates NCWM Annual Conference comments about EBT and WIC  
31 benefit thefts growing in LA County and more USDA money is being stolen. Thefts of government benefits have

1 gone from hundreds of thousands to hundreds of millions of dollars. This will eventually affect state Departments of  
2 Agriculture budgets. Taking on this issue may help secure funding from USDA and other federal programs to support  
3 fraud prevention and investigation. Suggests continuing to pursue the issue.

4 The committee recommends this as an informational item.

5 SWMA 2023 Annual Meeting: Alan Walker (FL) has volunteered to Chair the Skimmer Education Task Group. The  
6 PDC recommends continuing the Skimmer Education Task Group and look forward to the work they are doing.

7 NEWMA 2023 Interim Meeting: During the 2023 NEWMA Interim Meeting Jimmy Cassidy (Massachusetts)  
8 suggested that the scope of work of the TG be expanded to include other types of fraud. It was suggested that the TG  
9 begin to look at instances of fraud involving other devices as well as RMFD. Several other regulators commented on  
10 the need to keep the TG active, and agreed that expanding the scope of work should be considered.

11 The committee recommends this as an informational item.

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12 Mr. Ethan Bogren, Westchester County, New York | Committee Chair  
13 Ms. Valerie Forbes, Delaware | Vice Chair  
14 Mr. Scott Simmons, Colorado | Member  
15 Mr. Brian Terry, Arkansas | Member  
16 Ms. Sherry Turvey, Kansas | Member  
17 Mr. Perry Lawton, TESCO | AMC Representative  
18 Mr. John Bell, Missouri | Safety Liaison  
19 Ms. Tina Butcher, NIST, OWM | NIST Liaison  
20 Mr. Jerry Buendel, Retired | Certification Coordinator

21 **Professional Development Committee**

## Appendix A

### Summary of NIST OWM Training Conducted in 2021

(PDC Agenda Item EDU-2)

Summary of NIST OWM Training Conducted in 2021			
Area/Course Name	Start Date	Location	No. of Students
<b>Laboratory Metrology</b>			
Fundamentals of Metrology & LAP Problems Preparation	1/12/21 & 5/11/21	Web-based	6
<b>Regional Measurement Assurance Programs</b>			
MidMAP	10/24/21	Web-based	25
NEMAP	08/02/21	Web-based	21
SEMAP	03/22/21	Web-based	32
SWAP	08/30/21	Web-based	25
WRAP	05/03/21	Web-based	22
<b>Webinars</b>			
Basic Uncertainty Concepts	05/20/21	Web-based	8
Contract Review	03/11/21	Web-based	8
Contract Review	07/29/21	Web-based	5
Document Control and Record Keeping	03/04/21	Web-based	10
Document Control and Record Keeping	07/22/21	Web-based	6
Info Hour – Assessing Field Standards for Calibration & Use (3 sessions: 6/22/21; 9/21/21; & 11/9/21)	06/22/21	Web-based	172
Software Verification & Validation	06/10/21	Web-based	9
State Laboratory Annual Submission Process	07/01/21	Web-based	58
<b>Laws and Metric Program</b>			
<b>Packaging &amp; Price Verification</b>			
Handbook 130 – Examination Procedure for Price Verification <b>5 Sessions:</b> 1/21/2021; 2/16/2021; 4/14/2021; 7/14/2021; 10/1/2021	5 Sessions Jan to Oct 2021	Web-based	Total 178
Handbook 130 – Overview of the Uniform Packaging and Labeling Regulation <b>4 Sessions:</b> 2/17/2021; 4/15/2021; 7/15/2021; 10/7/2021	4 Sessions Feb to Oct 2021	Web-based	Total 156
Handbook 133 – How to Test Animal Bedding <b>4 Sessions:</b> 2/24/2021; 4/28/2021; 7/13/2021; 10/20/2021	4 Sessions Feb to Oct 2021	Web-based	Total 71
Handbook 133 – Overview of Handbook 133 <b>5 Sessions:</b> 2/18/2021; 4/19/2021; 7/27/2021; 8/26/2021; 10/14/2021	5 Sessions Feb to Oct 2021	Web-based	195
Weights and Measures Inspections – Evidence, Search and Seizure, and Due Process <b>5 Sessions:</b> 1/26/2021; 2/23/2021; 4/22/2021; 7/1/2021; 10/26/2021	5 Sessions Jan to Oct 2021	Web-based	Total 183
LPG (Propane) -Verifying the Net Contents of 20 lb Cylinders (Part 1) - NEW <b>4 Sessions:</b> 6/30/2021; 7/26/2021; 8/24/2021; 10/21/2021	4 Sessions Jun to Oct 2021	Web-based	Total 338
<b>Metric Education</b>			
Info Session – Metric Education Resources	05/22/21	Web-based	5

	09/11/21	Web-based	4
	09/29/21	Web-based	6
Info Session – Metric Estimation	08/14/21	Web-based	6
	09/15/21	Web-based	3
Measurement System Basics – SI and US Customary Units for Regulatory Officials	08/26/21	Webinar	23
<b>Legal Metrology Devices</b>			
No training seminars were offered in 2021.	--	--	--

## **Appendix B**

### **NIST OWM Training: Future Plans – Updated Information** (PDC Agenda Item EDU-2)

#### **No current commitments to in-person training for 2021**

- All in person field inspection classes postponed until further notice

#### **Training in FY 2022**

- Travel restrictions may lift later this summer
- Continuing to assess as the situation unfolds
  - Local pandemic restrictions
  - Travel restrictions for training staff and students
- Unclear how pandemic related restrictions will affect NIST OWM’s future in-person training for all programs
  - Impact of social distancing requirements on classroom size, configuration, and ability to present to groups of students
- Lab Metrology Program closely watching NIST OWM policies regarding hosting events in-person

#### **Training Going Forward**

- Will continue to offer virtual training
- Plan to expand available virtual training topics
- Experimenting with available technology and tools to best incorporate elements of “hands on” in-field inspection training

#### **Virtual Training Space**

- Significant progress on outfitting a virtual training space at NIST for OWM’s use in delivering virtual training
  - Small group within OWM has been working with their NIST staff to plan this effort
  - Space has been allocated and equipment purchases are in progress
  - Significant support from the Physical Measurement Laboratory (OWM’s larger operating unit)
  - Looking forward to beginning work on this space

#### **OWM Trainers**

- Participating in a variety of training courses as part of their professional development
  - Virtual training design, development, and delivery

#### **Considering Development of Hybrid Courses**

- For uses during and after pandemic
- Virtual sessions coupled with hands-on sessions using virtual technology and/or local on-site trainers to help facilitate

#### **See OWM Calendar of Events for Upcoming Training**

- [www.nist.gov/newsevents/upcomingevents/org/6436](http://www.nist.gov/newsevents/upcomingevents/org/6436)
- Note: A series of three new webinars planned on the topic of LPG Cylinder Refilling
  - LPG (Propane) – Verifying the Net Contents of 20 lb Cylinders (Part 1)” already in progress with several upcoming sessions

