

Professional Development Committee (PDC) 2022 Interim Meeting Agenda

Mr. Gary Milton, Committee Chair
Virginia

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.

Subject Series List

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

**Table A
Table of Contents**

Reference Key	Title of Item	PDC Page
EDU – EDUCATION.....		291
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**Table B
Glossary of Acronyms and Terms**

Acronym	Term	Acronym	Term
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		

Details of All Items
(In order by Reference Key)

1 **EDU – EDUCATION**

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

3 The NCWM now offers nine professional certification exams and two basic competency exams. The certification
 4 exams include Retail Motor Fuel Dispensers, Vehicle-Tank Meters, Small Capacity Scales, Medium Capacity Scales,
 5 Large Capacity Scales, Precision Scales, LPG and Anhydrous Ammonia, Price Verification and Basic Package
 6 Checking. Reporting on the Price Verification exam begins this year and reporting on the LPG and Anhydrous
 7 Ammonia will begin next year. The competency exams include Basic Weighing Devices and Basic Liquid-Measuring
 8 Devices. Professional certifications must be renewed every five years. The NCWM has implemented a process to
 9 notify candidates whose certificates have expired.

10 The exams for Precision Scales and LPG and Anhydrous Ammonia were released in July 2020. Work on developing
 11 the body of knowledge for mass flow meters will begin in early 2021 followed by packaging and labeling. The
 12 Committee encourages discussion about priorities for future exams and continuous improvement of the program.

13 In August 2018, the NCWM Board approved the guidelines for proctoring and implemented the system. Proctoring
 14 is a vital component of plans to accredit the certification program. Each organization is required to register the proctors
 15 they intended to use. Proctor qualifications are different for basic competency exams and professional certification
 16 exams so two lists of proctors are maintained. To eliminate conflicts of interest, proctors for professional certification
 17 exams must not be immediate supervisors of the candidate.

18 **Number of Proctors Per State** *(as of March 2021)*

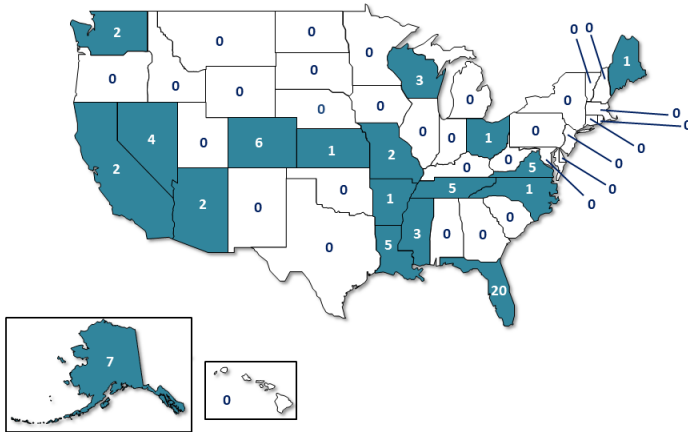
	FY17-18	FY18-19	FY19-20	FY20-21
Basic	39	57	70	38
Professional	17	28	37	41

19 **Number of States with Proctors** *(as of March 2021)*

	FY17-18	FY18-19	FY19-20	FY20-21
Basic	10	14	18	18
Professional	7	11	16	16

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

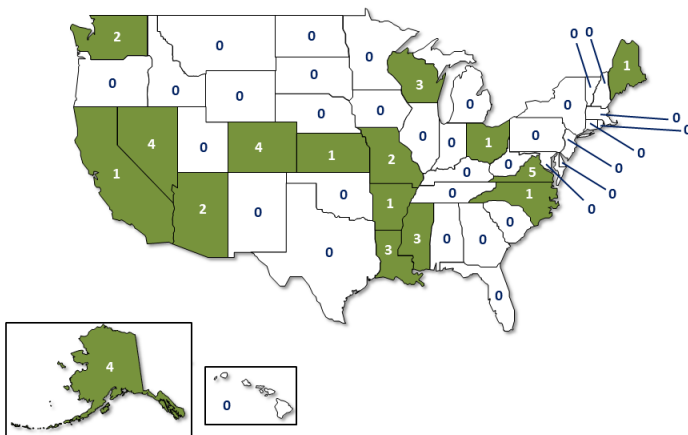
Distribution of Certified Proctors per State: Basic Competency Exams
Updated: March 2021



21

22 Proctors per state – Professional Certification Exams:

Distribution of Certified Proctors per State: Professional Certification Exams
Updated: March 2021



23

24 The proctor requirements are posted online at www.ncwm.com/proctoring.

25 Status of Current Tests

26 The NCWM has issued 1,152 professional certificates from the inception of the Professional Certification Program to
 27 September 30, 2020. Of the certificates issued, twelve have been issued to individuals in the private sector. The
 28 balance of the certificates has been issued to regulators. There has been a significant decline in participation in the
 29 program. In FY 17-18, NCWM awarded 257 professional certificates and in FY 18-19, it awarded 53 professional
 30 certificates, a decline of 79%. Participation improved slightly in FY 19-20 with 56 individuals earning certificates. It
 31 appears that the decline coincides with the requirement to proctor exams and the pandemic has had an impact on FY
 32 19-20 participation. Some of the certificates have reached their 5-year expiration and certificate holders will need to
 33 seek recertification. NCWM notifies certificate holders before expiration to facilitate recertification.

34 NCWM Professional Certificates issued:

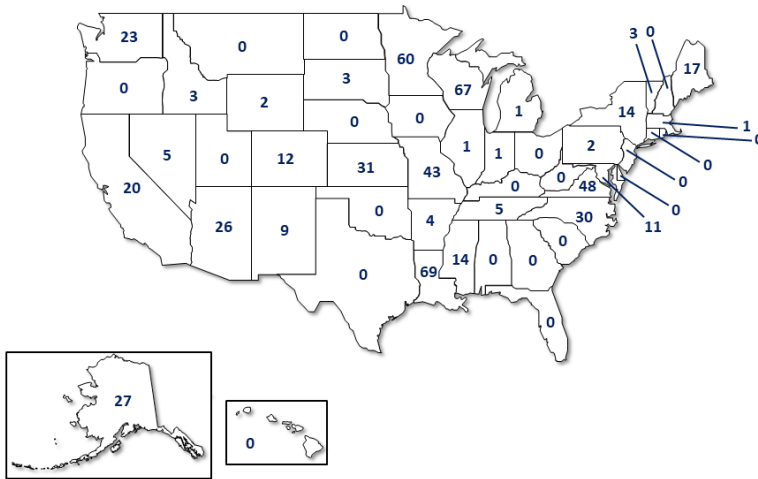
	FY10-11	FY11-12	FY12-13	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18
Exams Passed	44	94	105	62	198	140	142	257
Cumulative	44	138	243	305	503	643	785	1,042

35 **NCWM Professional Certificates issued (cont.):**

	FY18-19	FY19-20
Exams Passed	53	56
Cumulative	1,096	1,152

36 The following map shows the states with individuals holding an active professional certificate in one or more
 37 disciplines. Please note that the twelve active certificates issued to private sector individuals are included in these
 38 figures. This data only includes certificates that have not expired as of September 30, 2021.

Distribution of Certified Professionals per State
 Updated: August 2021



39
 40 The table below shows the 37 states using the certification program and the number of certificates earned since
 41 program inception and includes expired certificates. The Committee applauds these states and encourages increased
 42 use of the certification program nationwide.

State	Certificates	State	Certificates	State	Certificates
Minnesota	152	Arizona	28	Pennsylvania	7
Missouri	143	Maine	26	Wyoming	7
Wisconsin	84	Nevada	25	Arkansas	6
Maryland	77	New Mexico	23	Delaware	4
Virginia	70	New York	19	Michigan	3
Mississippi	56	Colorado	18	South Dakota	3
North Carolina	52	Connecticut	15	Oregon	2
Washington	50	Indiana	13	Tennessee	2
Kansas	45	Ohio	13	Montana	1
California	41	Private	12	New Hampshire	1
Louisiana	40	Idaho	11	West Virginia	1
Alaska	42	Massachusetts	11		
Nebraska	33	Vermont	8		

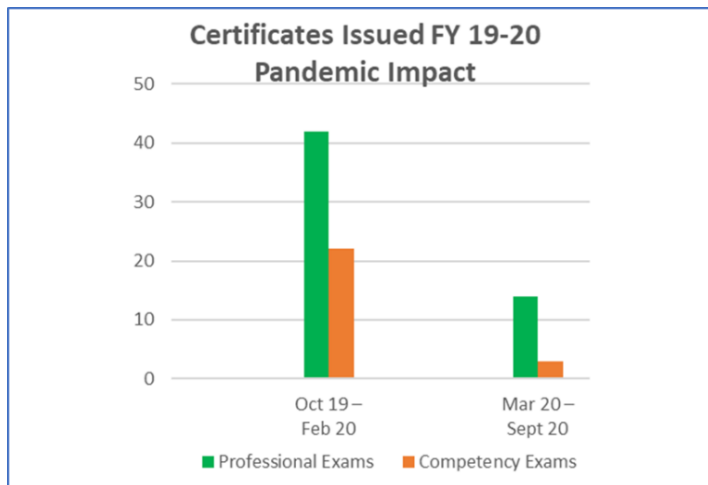
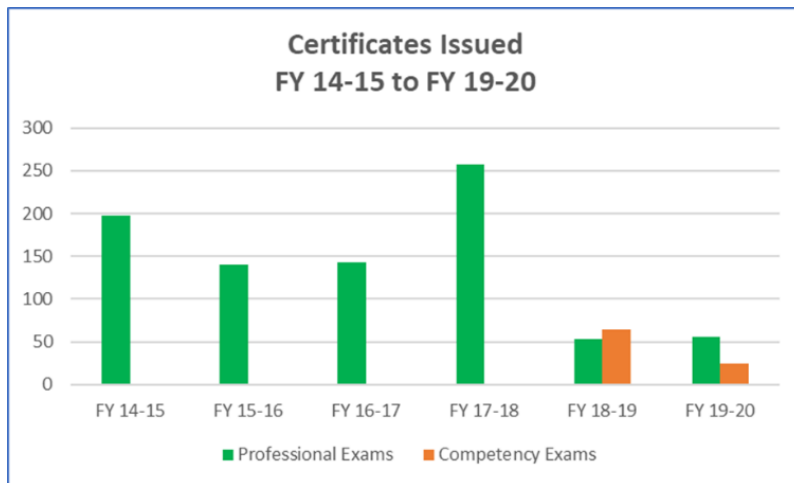
43 **NCWM Basic Competency Certificates issued:**

	FY17-18	FY18-19	FY19-20	FY20-21
Exams Passed	1	64	25	102
Cumulative	1	65	90	192

44 The table below shows those states with the highest utilization of the Basic Exams Program. The Committee applauds
 45 these states and encourages increased use of the certification program nationwide.

State	Certificates
Tennessee	42
Louisiana	45
Alaska	6
Colorado	3
Florida	3
Nevada	2
Kansas	1

46 The following graphs show the impact of the pandemic on certifications issued.



47 **NCWM Meeting Comments:**

48 NCWM 2021 Interim Meeting: The 2021 Interim Meeting was held virtually and immediately following the
 49 conclusion of the NCWM 2020 virtual meeting.

50 Mr. Robert Huff (DE) asked if NCWM had considered removing the requirement for proctoring. Mr. Hal Prince (FL)
 51 indicated the Board discussed this possibility and the suspension of this requirement would jeopardize the integrity of
 52 the exams and would preclude ever reaching accreditation. We are actively pursuing online proctoring and are hopeful

53 this is something that can be offered soon. Mr. Huff pointed out the decline in participation is obvious and those that
54 would like to renew are quite possibly unable to do so. Mr. Ethan Bogren (Westchester Co., NY) indicated his support
55 for exploring remote proctoring and that currently, lack of access to proctoring is preventing access to the exams for
56 his jurisdiction. Mr. Brogan continued to suggest if access to the exams and/or proctoring was offered as a benefit of
57 NCWM membership, it could be of value to inspectors, and promote growth of the membership. Ms. Kristin Macey
58 (CA) asked how remote proctoring would work. Mr. Jerry Buendel (Certification Coordinator) indicated there are
59 several providers and tiers of service and they are all being explored. Ms. Angela Godwin (Ventura Co., CA) indicated
60 remote proctoring is a real need.

61 During the committee work session on January 14, 2021, the members reviewed the post exam surveys provided by
62 NCWM. Mr. Buendel compiled the results and presented the information to the committee. The Committee observed
63 that too few examinees were reviewing the learning objectives in the respective exam module prior to taking the exam.
64 The Committee recommended a review the NCWM website to determine if examinees were clearly instructed to
65 review the modules and if the modules were easily accessible. Two survey respondents indicated that it would be
66 beneficial to have a two-step process to indicate that they had completed the section and that their submissions were
67 final. Mr. Paul Floyd (LA) commented that Louisiana was requiring more inspectors to take exams. Mr. Floyd noted
68 that the inspectors had a better grasp of the principles of operation and device exam requirements and as a result were
69 doing more thorough inspections and were more confident in their findings and determinations.

70 The members of the Professional Development Committee also discussed the expiration dates of individual
71 certifications during the work session. The Committee recommends that the Board of Directors take action to extend
72 the dates of all certifications expiring between March 2020 and August 2021 to September 2021. The Committee
73 recognized the difficulties of taking the exams because of restrictions caused by the pandemic as well as the barriers
74 associated with proctoring. The Committee noted that some jurisdictions or service companies may be using the
75 exams to justify promotions or require an employee maintain current certification(s) in order to maintain their current
76 job classification and salary. Mr. Jerry Buendel (Certification Coordinator) stated that the tests are reviewed annually
77 to determine if any changes made to the Handbooks would require changes to the exam questions. Mr. Buendel went
78 on to say that in the past three years he has made only two changes to current exam questions. The Committee also
79 discussed the precedent that would be set by extending the expiration and concluded that the current extraordinary
80 circumstances warrant an extension.

81 NCWM 2021 Annual Meeting: The 2021 Annual Meeting was held in an in person and online hybrid meeting session.
82 Comments were received in person and from members online. Several comments were heard about the difficulty and
83 scope of the exams, particularly when qualifying Registered Service Agents (RSAs). Mr. Scott Simmons (CO)
84 reported that Colorado tried to use the measuring basic competency exam as part of their RSA licensing program. Of
85 the three service companies that had technicians attempt the exam, there was a high failure rate and Colorado
86 concluded that it was too difficult, and too broad in scope for the purpose of RSA licensing. Mr. Simmons suggested
87 that an exam that was narrower in scope could be used for testing RSAs in Colorado. Mr. Greg VanderPlaats (MN)
88 said that the basic competency exams are too broad for use in registering or licensing service technicians, specifically
89 those who specialize in a single device type or class. They also do not charge their RSAs when testing, so moving to
90 the NCWM test would result in incurring a charge that does not currently apply. Mr. VanderPlaats also thanked the
91 Board for approving virtual proctoring and encouraged their continued use. Mr. Kevin Schnepf (CA) added that the
92 general basic competency exams would not work for state licensing requirements and suggested the exams be written
93 for specific device types. Mr. David Boykin (NCR) stated the basic competency exam was too broad. NCR deals
94 with POS systems and the exam covers devices not serviced by NCR technicians. Mr. Loren Minnich (KS) testified
95 that the state laws and regulations were a barrier to using the current basic competency exams. There is some
96 privatization in Kansas and some businesses service very specific device types such that a general exam would not
97 always be appropriate and in some cases, Kansas provides a special exam. Mr. Minnich suggested that there be a
98 way to mark questions during an exam that the test taker thought should be reviewed by NCWM for clarity and
99 consistency.

100 Mr. Minnich asked about the importance of accreditation. Mr. Jerry Buendel (Certification Coordinator) explained
101 that accreditation would give the program additional credibility and would assure that we have rigorous processes in
102 place to operate the testing program.

103 Mr. Paul Floyd (LA) suggested the exams and questions be reviewed periodically and was concerned about the

104 question review process's impact on accreditation. Mr. Tim Chesser (AR) asked what certification meant and why
105 certifications are good for five years. Mr. Buendel explained that certification demonstrates a thorough understanding
106 of the national technical requirements and their application in regulatory inspections. Five years was selected based
107 on the rate of change to the Handbooks and logical best fit for time between tests.

108 Mr. Kurt Floren (Los Angeles Co., CA) suggested we consider dividing exams to have one section cover specific
109 devices and another section tailored to cover a jurisdiction's laws and regulations both exams should include input
110 from the respective state. For example, there could be a pool of 100 questions, and the state could select from these
111 and add their own state-specific requirements questions.

112 Mr. Chesser asked where we found Subject Matter Experts (SMEs). Mr. Buendel stated that there are various means
113 of identifying SMEs including a request for assistance via the list serve, participation in the conference, and by their
114 reputation in the weights and measures community.

115 Ms. Cheryl Ayer (NH) asked if it would be best to have some weights and measures officials take the competency
116 exams so they can see what it entails to determine whether or not it will serve well for their service agents. Mr.
117 Buendel appreciated the suggestion and agreed that it would be helpful.

118 Ms. Tina Butcher (NIST OWM) shared that there has been some reluctance from state weights and measures officials
119 to use the same test for state inspectors and RSAs. The Committee also heard comments that some jurisdictions have
120 privatized and/or delegated some functions to RSAs.

121 During its work session, the Committee decided to recommend the Board of Directors consider authorizing a work
122 group to investigate further refining the NCWM testing program to include licensing programs for RSAs that could
123 be utilized by individual states. This work group could address such issues as the need for additional, more specific
124 competency exams, and variations in jurisdictional requirements and how to address these to make the test more
125 applicable to RSAs. The Committee also reviewed the results of the exam post exam surveys.

126 **Regional Association Comments:**

127 WWMA 2021 Annual Meeting: David Aguayo, San Luis Obispo County, CA requested additional comments from
128 the region regarding Registered Service Agent (RSA) exams for agents who service multiple jurisdictions through the
129 testing program offered by NCWM.
130

131 Mr. Kurt Floren, Los Angeles County, CA commented that RSA exams are tailored to California state laws and
132 regulations for the regions they service, and the exams through the NCWM are more general. He suggested that while
133 some of the core information should be consistent across exams, perhaps there should be a section or sections that
134 allow for information specific to the various jurisdictions. Cadence Matijevich, NV, agreed with Mr. Floren's
135 comments. Both acknowledged that certification and proctoring requirements would complicate the more
136 individualized approach but is worth consideration. Mahesh Albuquerque, Co, commented that the RSA exams should
137 cover only information that agents will need to conduct their business and not extraneous or additional questions not
138 related to their applications. Mr. Albuquerque generally supports the concept Mr. Floren and Ms. Matijevich
139 suggested.
140

141 The Committee recognizes the importance of developing certification programs for RSAs through the NCWM testing
142 program. The Committee recommends the NCWM Board of Directors support efforts to organize a task group to
143 further analyze and develop an action plan to move forward with a national RSA certification program

144 SWMA 2021 Annual Meeting: The PDC heard no comments on this item and recommends this item remains
145 informational.

146 NEWMA 2021 Interim Meeting: No Comments were heard during open hearings. The committee expressed
147 appreciation for the ongoing efforts of the NCWM Professional Certification Coordinator. The committee chair
148 provided membership with an update on available exams, and exams under development. Membership was also
149 updated regarding available remote proctoring for professional certification and basic competency exams.

150 CWMA 2021 Interim Meeting: Mr. Doug Rathbun (IL) provided information regarding college courses have a process
 151 for proctoring exams online in which the individual uses his/her phone to scan a room to demonstrate that no cheat
 152 sheets or other materials are available. He indicated this may be beneficial tool to use for the Professional Certification
 153 Program. Mr. Loren Minnich (KS) representing the Board of Directors indicated they are close to having an online
 154 proctoring option. Some beta testing has been done and the process is similar to what Mr. Rathbun described. Once
 155 the details are complete, it should be an easy process to have online proctoring capabilities.

156 **EDU-2 I Training**

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

159 At the 2019 Interim Meeting, the Committee was asked to consider reviewing and potentially updating/reintroducing
 160 the old NIST OWM training modules. The Committee agreed to investigate whether these modules are still available
 161 in digital form. Mr. Ross Andersen (NY, Retired) indicated that NIST has extensive training materials that we could
 162 leverage; requesting these materials from NIST may be beneficial.

163 The Committee also heard updates from several sources announcing upcoming device training hosted by Kansas and
 164 about upcoming combined NIST regional weights and measures metrology training. Three states recommended that
 165 NCWM and NIST OWM consider joint development of training videos and investigate funding from additional
 166 sources such as grants.

167 Ms. Butcher provided the following “Summary of NIST OWM Training Conducted in 2020” along with information
 168 regarding other training and professional development resources OWM has provided for weights and measures
 169 jurisdictions and service companies in the past year, including projects to assist those whose activities were restricted
 170 due to the COVID-19 pandemic.

Summary of NIST OWM Training Conducted in 2020			
Area/Course Name	Start Date	Location	No. of Students
Laboratory Metrology			
Balance & Scale Calibration Uncertainties	01/27/20	Gaithersburg, MD	8
Fundamentals of Metrology	02/03/20	Gaithersburg, MD	8
	02/10/20	Gaithersburg, MD	8
Fundamentals of Metrology & LAP Problems Preparation	09/16/20	Web-based	8
Mass Metrology Seminar	03/02/20	Gaithersburg, MD	8
Regional Measurement Assurance Programs			
MidMAP	10/06/20	Web-based	24
NEMAP	04/20/20	Web-based	16
SEMAP	04/20/20	Web-based	33
SWAP	05/04/20	Web-based	24
WRAP	05/04/20	Web-based	27
Webinars			
Basic Uncertainty Concepts	03/05/20	Web-based	3
Calibration Certificate Evaluation	02/25/20	Web-based	12
Conducting an Effective Management Review	02/13/20	Web-based	12
Info Hour – Mentoring and On-the-Job Training	08/04/20	Web-based	58
Info Hour – Quality Management System & SAP Reviews	10/13/20	Web-based	58
Internal Auditing Best Practices	02/27/20	Web-based	14
Software Verification & Validation	02/20/20	Web-based	6
State Laboratory Annual Submission Process	09/10/20	Web-based	95
Laws and Metric Program			
Packaging & Price Verification			

Handbook 130 – Examination Procedure for Price Verification <i>13 Sessions:</i> 03/25/20; 04/08/20; 04/13/20; 04/14/20; 04/16/20; 04/20/20; 04/21/20; 05/19/20; 06/16/20; 07/22/20; 09/22/20; 10/14/20; 12/01/20	13 sessions May to Dec. 2020	Web-based	Total 599
Handbook 130 – Overview of the Uniform Packaging and Labeling Regulation <i>11 Sessions:</i> 03/26/20; 04/09/20; 04/15/20; 04/17/20; 04/22/20; 04/24/20; 05/21/20; 06/17/20; 07/23/20; 10/14/20; 12/1/20	11 sessions Mar. to Dec. 2020	Web-based	Total 562
Handbook 133 – Checking the Net Contents of Packaged Goods <i>8 Sessions:</i> 04/23/20; 04/27/20; 04/29/20; 04/30/20; 05/20/20; 06/18/20; 08/05/20; 10/15/20	8 sessions Apr. to Oct. 2020	Web-based	Total 420
Handbook 133 – How to Test Animal Bedding <i>6 Sessions:</i> 09/21/20; 09/30/20; 10/08/20; 10/21/20; 11/18/20; 12/09/20	6 sessions Sep. to Dec. 2020	Web-based	Total 179
Handbook 133 – Overview of Handbook 133	12/03/20	Web-based	74
Weights and Measures Inspections – Evidence, Search and Seizure, and Due Process <i>6 Sessions:</i> 09/22/20; 10/01/20; 10/08/20; 10/20/20; 11/17/20; 12/08/20	6 sessions Sep. to Dec. 2020	Web-based	Total 613
Metric Education			
Info Session – Metric Education Resources	09/12/20	Web-based	9
	09/30/20	Web-based	6
Info Session – Metric Estimation	09/16/20	Web-based	4
	09/26/20	Web-based	6
Measurement System Basics – SI and US Customary Units for Regulatory Officials	08/12/20	Web-based	65
	10/21/20	Web-based	68
Legal Metrology Devices			
No training seminars were offered in 2020.	--	--	--

171 A summary of activities in each OWM Program area follows:

172 **Laboratory Metrology Program**

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

174 **General.** The Laboratory Metrology Program conducted several in-person classes prior to the COVID-19 pandemic
 175 restrictions imposed in March 2020. This program also developed a web-based Fundamentals of Metrology and LAP
 176 Problems Preparation Course. These courses will be used to provide formalized training to new Metrology staff until
 177 in-person training resumes.

178 OWM is also pleased to announce that Dr. Michael Hicks was appointed as Program Leader for the NIST OWM
 179 Laboratory Metrology Program in Fall 2020.

180 **Regional Metrology Association Training.** All regional metrology association training was converted to a virtual
 181 format and the training was conducted online. Special topics included “Roundtable Discussions” and “Proficiency
 182 Testing Reporting and Planning.”

183 **Upcoming Lab Program Training.** The Laboratory Program is continuing to schedule online training as outlined in
 184 the OWM Calendar of Events. The Program is scheduling some on-site training for June 2021; however, the plans to
 185 conduct this training on-site is contingent upon the re-opening of the NIST campus. As the date of the training
 186 approaches, there may be a need to shift the training to a virtual format. Consequently, registered students are
 187 cautioned *NOT* to make travel arrangements pending written confirmation. Note that the decision to propose this

188 particular training in an in-person format so far in advance in light of the uncertainty of conditions is based on the
 189 States' laboratory metrologists' dependency on training required for designated signatories for calibration services
 190 and OWM's long lead time for securing contract trainers.

191 **Laws and Metric Program**

192 **General.** The Laws and Metric Program cancelled all previously scheduled in-person courses as of April 2020 due to
 193 the COVID-19 pandemic. As of June 2020, OWM opened its webinars to industry at no charge. All "in-person" field
 194 inspection classes are postponed until further notice. OWM is not currently scheduling any in-person field inspection
 195 classes for the 2021 calendar year.

196 **Webinar Offerings.** Since April 2020, a total of 2,352 students have participated in Laws and Metric Program
 197 webinars. This includes training for 2194 students in the area of Laws and Regulations and training for 158 students
 198 in other Laws and Metric Program areas.

199 In April 2020, the Laws and Metric Program's Mr. David Sefcik began offering three previously developed webinars
 200 and continued offering these at periodic intervals through December 2020.

- 201 • Examination Procedure For Price Verification, HB 130 (2 hr.)
- 202 • Overview of the HB 130 Uniform Package and Labeling (UPLR) and Uniform Method of Sale (MOS) of
- 203 Commodities Regulations (2 hr.)
- 204 • Handbook 133 – "Checking the Net Contents of Packaged Goods - Overview" (2.5 hr.)

205 In September 2020, the Laws and Metric Program began offering three new webinars developed by Mr. Ken Butcher
 206 and presented by Mr. David Sefcik. These were offered at periodic intervals through December 2020.

- 207 • **Handbook 133 – How to Test Animal Bedding**
- 208 ○ Covers the different types of animal bedding, method of sale, test equipment, audit and test procedure,
- 209 and documentation and evaluation of test results.
- 210 • **Handbook 133 – Overview**
- 211 ○ Covers the different types of mulch and soil and how they are sold (method of sale), the labeling
- 212 requirements, test equipment, sampling (and alternative sampling), test procedure, and evaluation of test
- 213 results.
- 214 • **Weights and Measures Inspections – Evidence, Search and Seizure, and Due Process**
- 215 ○ Provides an overview on how the U.S. Constitution, the Bill of Rights, Laws, and Court decisions control
- 216 how weights and measures inspections must be conducted. You will learn about the powers and duties
- 217 of the Director and the special police powers of an official, as outlined in Handbook 130, Uniform
- 218 Weights and Measures Law.
- 219 ○ Topics include a checklist for "opening" and "closing" an inspection; consent; search and seizures under
- 220 the 4th Amendment of the U.S. Constitution; defining evidence and provide suggestions on collecting,
- 221 protecting, and using it to support enforcement actions evidence; enforcement actions and recommended
- 222 compliance procedures; and model guidelines for the administrative review process.

223 **Legal Metrology Devices Program**

224 **General.** As with the two other OWM program areas, the Devices Program was forced to postpone the following
 225 training courses originally scheduled during the period of April 2020 to May 2021:

- 226 • High Precision Scales (CWMA)
- 227 • Vehicle Scales (VA)
- 228 • Liquefied Petroleum Gas Liquid-Measuring Devices (SD)
- 229 • Retail Motor-Fuel Dispensers (LA)
- 230 • Vehicle-Tank Meters (CA)
- 231 • Vehicle-Tank Meters (AL)

232 All “in-person” field inspection classes are postponed until further notice. OWM is not currently scheduling any in-
233 person field inspection classes for the 2021 calendar year.

234 While the Devices Program did not have materials ready to present in a virtual format, the Devices Program staff
235 worked to develop other tools and information that could assist weights and measures officials and service personnel
236 working from home on their personal professional development during the restrictions of the pandemic. The Devices
237 Program is exploring the development of webinars in the device inspection area.

238 **Study Guides.** Mr. John Barton, Ms. Tina Butcher, and Ms. Diane Lee of the Devices Program staff along with Ms.
239 Lisa Warfield of the Laws and Metric Program staff developed a series of seven “study guides” to assist field
240 inspectors and service personnel working from home or otherwise restricted from routine activities during the COVID-
241 19 pandemic. These study guides are designed for use by weights and measures officials and service personnel to
242 enhance and strengthen their knowledge of specific areas of legal metrology inspection and testing and are intended
243 for use even after the restrictions of the pandemic are lifted.

244 The study guides are not intended to be a comprehensive summary of all training and development opportunities
245 recommended for inspectors working in a specific topic area. Rather, they are intended to help individuals in their
246 professional development by targeting the use of information and resources available on the NIST OWM website.
247 Study guides are particularly ideal for use by individuals who are working remotely and are striving to enhance and
248 strengthen their technical knowledge.

249 Included in each study guide are the following:

- 250 • An overview of resources available on the NIST OWM website, including self-study course material; videos;
251 and newsletter articles and guidance documents on legal metrology issues.
- 252 • Suggestions for how each of these resources might be used for either independent, individual study or by
253 groups of inspectors/service personnel led by an instructor or supervisor.
- 254 • Information on other training opportunities, including both on-line training and in-person instructor-led
255 training and other resources for professional development.
- 256 • These study guides are intended for use in conjunction with other resources on the NIST OWM website,
257 including Handbooks 44, 130, and 133.

258 Study guides have been developed and posted on OWM’s web site for the following field inspection areas:

- 259 • Grain Moisture Meters and NIR Grain Analyzers
- 260 • Measuring – Retail Motor-Fuel Dispensers
- 261 • Measuring – Large Meters
- 262 • Measuring – Liquefied Petroleum Gas Liquid-Measuring Devices
- 263 • Packaging and Labeling Inspections
- 264 • Weighing – Small Scales
- 265 • Weighing – Large Scales

266 These study guides are available for download free of charge at following link:

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

268 **Technical Article and Knowledge Check for Self-Study.** Mr. Rick Harshman of the Devices Program developed a
269 Technical Article titled “Making Sense of “Min” on Class I and Class II Scales.” This explains the concept of “Min”
270 and provides guidance on its use and application in transactions encountered by jurisdictions which are reportedly
271 regulating a growing number of Class I and Class II scales.

272 Mr. Rick Harshman and Ms. Tina Butcher also developed a new feature called a “Knowledge Check” to accompany
273 this article. The Knowledge Check serves as a tool for jurisdictions who might want to quiz their employees on their
274 knowledge retention after assigning them the task of reading the article. Depending on feedback, the Devices Program
275 may include Knowledge Checks as a regular accompaniment to its technical articles.

276 **General – OWM Training**

277 Ms. Butcher reported all NIST OWM “in-person” field inspection classes are postponed until further notice. OWM
278 is not currently scheduling any in-person field inspection classes for the 2021 calendar year. This does not include
279 the training referenced under the Laboratory Metrology Program’s summary that is tentatively scheduled for June
280 2020 if conditions permit.

281 OWM is not currently making specific commitments for field inspection training pending changes in restrictions
282 related to the COVID-19 situation that would help ensure the safety of its students and staff involved in such training
283 and traveling to attend these events. OWM will continue to assess these conditions as the situation unfolds.

284 It is unclear how pandemic-related restrictions will affect OWM’s in-person training in the future. The decision to
285 resume in-person classes will be driven by Centers for Disease Control recommendations local pandemic restrictions,
286 and travel restrictions for staff and students. OWM is also considering the impact of social distancing requirements
287 on classroom size and configuration and ability to present to groups.

288 In the meantime, OWM will continue to offer virtual training and plans to expand its offerings. Ms. Butcher
289 encouraged those interested in upcoming training to consult OWM’s Calendar of Events for the most current
290 information: <https://www.nist.gov/news-events/upcoming-events/org/6436>

291 Ms. Butcher shared that, in the latter months of 2020, a team of training developers and facilitators within OWM
292 begun working to consider how OWM might restructure its training program to include more virtual offerings. In
293 addition to considering which existing (or yet-to-be-developed) courses might lend themselves to training in a virtual
294 format, this team has discussed the importance of incorporating some equivalent of the “hands-on” element that is a
295 cornerstone of field inspection courses and the distinction between training and technical presentations. OWM is
296 exploring the idea that, should resources permit it, it may be possible to record some webinar offerings at some point
297 in the future; these could possibly be made available “on demand” and accompanied by periodic question and answer
298 sessions with a live instructor. OWM is continuing to explore the use of technology and available features to adapt
299 its courses to a virtual format and is also considering whether a “hybrid” approach might be used in which a portion
300 of an existing course could be presented virtually and followed by smaller, in-person classes to incorporate a hands-
301 on demonstration and student assessment.

302 While this shift in thinking was driven initially by the restrictions of the COVID-19 pandemic, OWM has recognized
303 the value of providing virtual courses and training events as a way of providing more training opportunities to a larger
304 number of OWM customers. Thus, while OWM expects to resume offering in-person training opportunities when
305 conditions once again permit, OWM sees the value of continuing to include a virtual component to its training even
306 when pandemic restrictions are lifted.

307 As OWM considers how to best expand its virtual training offerings, OWM staff have been experimenting with
308 available technology and tools to best incorporate elements of “hands on” activities that are so important to its field
309 inspection training courses. OWM is also considering the development of “hybrid” courses in which virtual sessions
310 are coupled with “hands on” sessions using virtual technology and/or local onsite trainers to help facilitate these
311 sessions. Such hybrid courses would be intended for use both during the COVID-19 pandemic and after the associated
312 restrictions are lifted.

313 Ms. Butcher reported that NIST OWM is outfitting a space at NIST OWM specifically suited to conduct virtual
314 training events and web-based meetings. OWM trainers are continuing to participate in a variety of training courses
315 as part of their own professional development, including education in virtual training design, development, and
316 delivery as well as instructional design.

317 Ms. Butcher once again thanked the jurisdictions who have hosted the many “in-person” NIST training seminars in
318 the past, recognizing the effort required to host these events and coordinate the logistics. She also recognized co-
319 instructors who have assisted in presenting these events. NIST OWM looks forward to continued work with the
320 weights and measures community to develop and implement training to assist weights and measures officials and
321 service personnel in their continued professional development.

322 **NCWM Meeting Comments:**

323 NCWM 2021 Interim Meeting: The 2021 Interim Meeting was held virtually and immediately following the
324 conclusion of the NCWM 2020 virtual meeting. Ms. Cheryl Ayer (NH) asked if NIST OWM was continuing work
325 on providing an on-demand video for small capacity scale field inspection. Dr. Doug Olson (NIST OWM) and Ms.
326 Tina Butcher (NIST OWM) both indicated the plan was to continue that project. Multiple comments from the
327 membership were heard thanking NIST OWM for the training provided. The comments indicated this training was
328 invaluable during the pandemic.

329 NCWM 2021 Annual Meeting: The 2021 Annual Meeting was held in an in person and online hybrid meeting session.
330 Comments were received in person and from members online. During the 2021 Annual Meeting open hearings an
331 updated presentation was given on NIST training activity. The updates are included in Appendix B of this report.

332 Ms. Cheryl Ayer (NH) indicated her support for hybrid and virtual training and pointed out that there is cost savings
333 with no need to travel, etc.

334 **Regional Association Comments:**

335 WWMA 2021 Annual Meeting: Ms. Tina Butcher, NIST OWM, commented that NCWM PDC has requested a
336 summary of NIST trainings each July. A list of trainings from 2019 is included in agenda for this Annual meeting.
337 She commented that online training is ongoing, but no in-person training is currently being conducted. She anticipated
338 that in-person trainings would be offered in the future.

339
340 While online training has been especially valuable during the pandemic, the Committee looks forward to the offering
341 of in-person trainings.

342 SWMA 2021 Annual Meeting: The PDC heard no comments on this item and recommends this item remains
343 informational.

344 NEWMA 2021 Interim Meeting: Ms. Tina Butcher (NIST OWM) gave a brief update from NIST OWM. NIST is
345 not currently offering any in person training at this time and there are no in person trainings on the schedule. NIST
346 has been able to offer numerous virtual web-based trainings to jurisdictions in both the metrology and legal metrology
347 devices fields. She also commented on the great progress taking place on the training studio being planned by NIST
348 which will enhance the availability and quality of virtual trainings that can be offered. Mr. David Sefcik (NIST OWM)
349 gave an update of the NIST training studio. He stated that great progress is being made in moving this forward. There
350 is full commitment and support from NIST management, and all equipment has been purchased. NIST is waiting on
351 a remodel of the building which may take 1-2 years, however that does not prevent NIST staff from working and
352 practicing with the purchased equipment. The goal is to improve the quality and availability of virtual web-based
353 trainings that can be offered, and this will continue to be a work in progress.

354 CWMA 2021 Interim Meeting: Ms. Tina Butcher (NIST OWM) provided an update from NIST indicating that all
355 training is currently being done virtually but will resume in-person once pandemic restrictions have been lifted. She
356 noted that each July the NCWM PDC has requested a summary of NIST OWM training for the prior calendar year.
357 A summary of OWM's 2020 training is included in the CWMA's agenda along with a breakdown of training provided
358 in each of the three OWM programs which provide training. Ms. Butcher informed the committee that NIST will
359 provide an update on a summary of trainings for a calendar year. Currently, three of the four training programs within
360 the OWM provide virtual training. Ms. Butcher indicated that Laboratory Metrology may be the first to return to in-
361 person training but is currently exclusively virtual and will keep a virtual presence in the future in addition to in-person
362 trainings. She informed the committee the Legal Metrology Devices Program does not do webinar-based trainings but
363 did develop study guides and other resources for study and skill development. NIST has been working to create a
364 virtual training studio to host webinars and create videos to be used for trainings and is expected to be complete in the
365 next year and half. Ms. Butcher encouraged members to look for training opportunities frequently as the list of
366 available trainings is updated regularly on NIST's website. Mr. Charles Stutesman (KS) commented that he
367 appreciates the work of the NIST trainers but has realized the pandemic has brought to light that certain trainings are
368 needed that cannot be done virtually such as vehicle scale, LPG bulk truck, etc. Mr. Stutesman indicated he would
369 like NCWM to begin developing training programs utilizing the subject matter experts found within its membership.
370 He reminded the committee of the distinction between professional certification and trainings and would like the PDC
371 to move forward with generating training materials. Mr. Mike Harrington (IA) complimented the NIST trainings that

372 have been made available, specifically mentioning the Evidence Search and Seizure class, which he recommends to
 373 all inspectors. He also agreed that in-person training offers things that virtual trainings cannot. Mr. Doug Rathbun
 374 (IL) indicated that during the CWMA executive meeting it was made known the CWMA has a fair amount of funds
 375 available that may be utilized for in-person training within the Central region. Ms. Tina Butcher (NIST OWM)
 376 concurred with previous commenters that there is a lot of expertise in the community and that a vast amount of training
 377 is provided informally, and informal training holds a critical place in professional development.

378 **EDU-3 I Instructor Improvement**

379 NIST OWM has provided legal metrology training for weights and measures jurisdictions and industry for many years
 380 but does not have the resources to respond to the numerous training requests it receives. OWM has long recognized
 381 that there are many individuals with extensive legal metrology experience who have the skills needed to provide this
 382 type of training. OWM hopes to draw from this pool to develop trainers who can present schools with NIST, thus
 383 leveraging NIST resources; providing more timely classes; and providing a way to more broadly share the valuable
 384 expertise these individuals possess. In the past ten years, NIST OWM has taken on more field inspection classes than
 385 it would otherwise be able to do because of the co-instructors drawn from its current pool of trainers.

386 Over the past ten years, OWM renewed its efforts to develop trainers, including the following.

- 387 • NIST held multiple trainer workshops and webinars designed to assist individuals in the community with
 388 technical expertise to enhance and strengthen their abilities as “trainers.”
- 389 • NIST identified tools and resources to assist trainers in their individual professional development and in
 390 conducting their own self-assessments of their knowledge, skills, and abilities as trainers.
- 391 • NIST provided multiple grants for a combined total of \$212,000 to the NCWM intended to pay travel costs
 392 of individuals to travel within their regions to conduct training and to participate in NIST training for
 393 trainers. This partnership has enabled NIST to bring in candidates for NIST-sponsored training such as
 394 “train the trainer” classes and to participate in NIST technical training schools.
- 395 • NIST has made a concerted effort to involve external co-instructors in numerous NIST training events and
 396 continues to use these co-instructors to the extent possible. Through an application process, in collaboration
 397 with weights and measures directors and nominated training candidates, NIST has identified a group of
 398 people who are now working with NIST to develop the knowledge, skills, and abilities to work with NIST
 399 staff in presenting technical training schools. Several candidates in the NIST Trainer Program have already
 400 served as co-instructors for NIST technical training schools and have done an excellent job. OWM
 401 sincerely appreciates the willingness of those trainers and their directors who have supported their
 402 participation to devote time to making these seminars successful.

403 A list of all people who have attended a NIST “Train the Trainer” class or associated events has been posted on the
 404 NCWM website. Many people on this list have attended NIST “train the trainer” events and workshops but have not
 405 served as co-instructors for NIST classes and, in some cases, have not attended NIST technical training schools in the
 406 topic areas in which they have declared an interest in serving as trainers and for which they are listed on the website.
 407 Conversely, there are people on this list who have attended the workshops and NIST technical training seminars and
 408 have also served as co-instructors in NIST training seminars. Thus, there is a variation in the experience levels of
 409 individuals on this list, particularly with presenting NIST seminars.

410 OWM has not authorized anyone (external to NIST) to independently present “NIST” classes. NIST training seminars
 411 on field inspection topics are only held a limited number of times each year. This poses a challenge in sustaining
 412 regular interaction and involvement of NIST trainer candidates. Nor does NIST have the resources to develop and
 413 sustain the development of all the individuals that have been invited to participate in the NIST trainer program
 414 activities and events held in the past. However, even if a candidate has not worked directly with NIST staff in
 415 presenting NIST seminars and is not designated to participate as an instructor in a NIST seminar, they and their
 416 jurisdictions can benefit from the experience and the candidate can still provide valuable training in their jurisdiction
 417 and region. Additionally, NIST OWM is authorized by IACET to issue “Continuing Education Units” for certain
 418 training seminars and, as part of this authorization, there are certain provisions that an instructor must follow to meet
 419 these requirements.

420 NIST values the expertise that the co-instructors bring to the NIST training events and plans to continue inviting co-
421 instructors to NIST training events. Although the funds provided in past grants to the NCWM have been exhausted,
422 NIST currently plans to pay for the travel expenses of any co-instructor invited to work with NIST on a NIST seminar
423 and hopes these individuals and jurisdictions will continue to assist NIST in this capacity.

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

427 The Committee has reiterated multiple times in the past that the responsibility for the training employee rests with
428 individual organizations (weights and measures jurisdictions and industry alike). While NIST and other training
429 providers offer excellent sources of training and training materials, organizations must develop and manage their own
430 training programs, including developing trainers; establishing individual development plans for employees; and
431 identifying strategies for continually assessing and responding to training needs. The Committee recognizes that NIST
432 OWM cannot possibly train all weights and measures inspectors in the country. The state and municipal jurisdictions
433 have ultimate responsibility for training and qualifying their personnel. To fulfill this responsibility, jurisdictions
434 should be making individual plans to maintain or bolster their training efforts. NIST OWM should be viewed as one
435 vital resource to support that effort. The Professional Development Committee is another resource. The Committee
436 has created and posted on its website, the “Body of Knowledge” to establish uniform learning objectives for weights
437 and measures professionals. In addition, the Committee has posted a Model Field Training Program document on its
438 website. This program outlines methods to evaluate and document training and offers guidance on training new
439 inspectors and taking steps to ensure their ongoing development.

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

442 **NCWM Meeting Comments:**

443 NCWM 2021 Interim Meeting: The 2021 Interim Meeting was held virtually and immediately following the
444 conclusion of the NCWM 2020 virtual meeting. Ms. Tina Butcher (NIST OWM) indicated that, due to continued
445 restrictions brought about by the COVID-19 pandemic there have been no changes in the status of NIST OWM’s work
446 in this area from what was reported during the Committee’s July 2020 Virtual Technical Sessions. The Committee
447 received no comments during the open hearing on this item.

448 NCWM 2021 Annual Meeting: The 2021 Annual Meeting was held in an in person and online hybrid meeting session.
449 The Committee received no comments during the open hearing on this item.

450 **Regional Association Comments:**

451 WWMA 2021 Annual Meeting: During the 2021 WWMA Annual Meeting the following comments were received:
452 Ms. Tina Butcher, NIST OWM commented that they work continuously throughout the year to develop new trainers.
453 She reports that they intend to return to full cooperation with training partners post-pandemic. Ms. Butcher further
454 commented that she appreciated the efforts of all regional support training throughout the year.

455
456 The Committee continues to support the efforts of NIST and their training partners.

457 SWMA 2021 Annual Meeting: The PDC heard no comments on this item and recommends this item remains
458 informational.

459 NEWMA 2021 Interim Meeting: No Comments were heard during open hearings. Due to ongoing COVID related
460 restrictions there has not been much activity on this item.

461 CWMA 2021 Interim Meeting: Ms. Tina Butcher (NIST OWM) provided a brief update on NIST OWM activities in
462 the area of “Instructor Improvement.” Because OWM’s Instructor Training Program is largely structured around in-
463 person training events, little has been done in this area since the restrictions imposed by the COVID-19 pandemic on
464 OWM’s offering of in-person training. Ms. Butcher indicated that OWM remains fully committed to supporting

465 instructor training and expects to resume this collaborative work once in-person training resumes. OWM is also
 466 considering whether there might be opportunities to collaborate with its current corps of co-instructors in a hybrid
 467 format, possibly including virtual training for portions of a class in conjunction with a hands-on training portion
 468 conducted by co-instructors in their areas. She expressed continued appreciation to these trainers for sharing their
 469 time and expertise and to their administrators for allowing them to devote time in support of this program. Mr. Charles
 470 Stutesman (KS) commented he would like to see the conference utilize the persons that have completed the train the
 471 trainer programs and have been determined as subject matter experts to conduct trainings. He indicated that using
 472 those subject matter experts in that way will help fill the gaps in areas that have been exposed as in-person training
 473 needs due to the pandemic and travel restrictions.

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

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

478 The following is a list of technical presentations made at the NCWM since 2009. Presentations given since 2010 are
 479 available at www.ncwm.com/annual-archive.

- 480 • Planning and Coordinating a National Market Place Survey (Ms. Rachelle Miller, WI, 2017)
- 481 • The Life Cycle of Petroleum from Well to Retail (Mr. Prentiss Searles, API 2017)
- 482 • The United States Mint at Denver – Gold, Coins and Embezzlement (Mr. Thomas Fesing, 2016)
- 483 • Understanding Transportation Network Systems (Ms. Andrea Ambrose Lobato, Lyft and Mr. Bob O’
 484 Leary, Uber 2016)
- 485 • Regulatory Consideration for Legalized Marijuana (Ms. Julie Quinn, MN, and Mr. Nick Brechun, CO,
 486 2016)
- 487 • Motor Oil Quality Violations (Mr. Tom Glenn, Petroleum Quality Institute of America, 2014)
- 488 • Making Sense of Electronic Receipts (Mr. Justin Hotard, Vice President and General Manager, NCR
 489 Corporation, 2014)
- 490 • LNG & CNG Motor Fuel – A Technical Briefing from Industry (Mr. Doug Horne, President CVEF, Mr.
 491 Zack Wester, Blu, Mr. Jeff Clarke, NGVA, 2014)
- 492 • Taximeter Technology Advancements (Mr. Matt Daus, International Association of Transportation
 493 Regulators, 2013)
- 494 • Advanced Vehicles and Fuel Quality (Mr. John M Cabaniss, Jr., Association of Global Automakers, 2013)
- 495 • Economic Justification and Demonstrating Value of Weights and Measures (Mr. Tim Chesser, Arkansas
 496 Bureau of Standards, 2012)
- 497 • Conducting Effective Marketplace Surveys and Investigations (Ms. Judy Cardin, Wisconsin Weights and
 498 Measures, 2012)
- 499 • Public Relations and Customer Service as Regulators (Mr. Doug Deiman, Alaska Division of Measurement
 500 Standards/CVE, 2012)
- 501 • An Overview of Unit Pricing in the United States (Mr. David Sefcik, NIST OWM, 2011)
- 502 • Grocery Unit Pricing in Australia (Mr. Ian Jarratt, Queensland Consumers Association, 2011)
- 503 • Grocery Unit Pricing in Canada (Mr. Ian Jarratt, Queensland Consumers Association, 2011)
- 504 • The U.S. Hydrogen Measuring System: The Turning Point? (Ms. Kristin Macey, California Division of
 505 Measurement Standards, 2011)
- 506 • Corrosion in Ultra Low Sulfur Diesel Underground Storage Systems (Mr. Prentiss Searles and Ms. Lorri
 507 Gainawi, American Petroleum Institute, 2010)
- 508 • Risk-Based Inspection Schemes (Mr. Henry Oppermann, Weights and Measures Consulting, LLC, 2010)
- 509 • Diesel Exhaust Fluid (DEF) (Mr. Gordon Johnson, Gilbarco, Inc., and Mr. Randy Moses, Wayne, 2009)
- 510 • Fuel Volatility and Ethanol Blending (Mr. Jim McGetrick, BP Products, 2009)
- 511 • Investigative Techniques (Mr. Michael Cleary, Retired, 2009)

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

- 513 • Investigative reporting

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

517 **NCWM Meeting Comments:**

518 NCWM 2021 Interim Meeting: Meeting was held virtually and immediately following the conclusion of the NCWM
519 2020 virtual meeting.

520 Ms. Tina Butcher (NIST OWM) offered to develop a technical presentation related to the work their office is doing
521 with master meters. Ms. Cheryl Ayer (NH) and Ms. Rachele Miller (WI) expressed interest. Mr. Charles Stutesman
522 (KS) suggested NIST training on the gravimetric proving process and suggested training on the use of error weights
523 would be valuable.

524 NCWM 2021 Annual Meeting: The 2021 Annual Meeting was held in an in person and online hybrid meeting session.
525 PDC member, Mr. Ethan Bogren (Westchester Co., NY) provided an update to recommended topics from previous
526 NCWM and Regional Association meetings.

- 527 • Training on gravimetric testing of motor oils
- 528 • Training on mass flow meters/master meters
- 529 • Training on Class II scales for jewelry and cannabis
- 530 • Review of NTEP Organization, Processes, and Certificate system
- 531 • Training on method of sale and gravimetric testing for LPG/Propane bottle filling
- 532 • Training on testing of EV charging stations

533 The Committee received no comments during the open hearing on this item.

534 **Regional Association Comments:**

535 WWMA 2021 Annual Meeting: During the 2021 WWMA Annual Meeting the following comments were received:
536 David Aguayo, San Luis Obispo County, CA stressed the importance of continuous training, and encourages the
537 Committee to provide additional training a opportunities in the regional and national standard setting process. He also
538 encouraged development of training for regional committee members including incoming regional committee chairs.
539 Cadence Matijevich, Nevada, commented that she was encouraged to hear Dr. Lippa's update on regulation related to
540 electrification, EV vehicle, its infrastructure and stressed that it will be very important as we move forward.

541
542 Based on input collected from various standing committee members, the PDC believes there is a need for committee
543 training that is held separate from and prior to the region's annual meeting. The Committee recommends that the
544 Western Weights and Measures Association Board of Directors consider developing a task group for the development
545 of a WWMA committee member and leadership workshop prior to the 2022 WWMA Annual Meeting in Orange
546 County, CA

547 SWMA 2021 Annual Meeting: Mr. Tim Chesser (AR) suggested regional committee training for members of the
548 committees for all four regions. Mr. Steven Benjamin (NC) suggested all states consider following Louisiana's
549 reallocation/pay increase process based on NCWM exams.

550 NEWMA 2021 Interim Meeting: The committee heard comments from Mr. Jimmy Cassidy (MA) that several topics
551 are current and may impact NEWMA regions, stressing the certain growth of Electrical Vehicle Charging Equipment
552 (EVCE) and issues with the sale of Cannabis. He supported these topics on both a national and regional basis and
553 supports additional conversations that NEWMA can have to support regional training in these areas. Mr. Marc
554 Paquette (VT) made comments also supporting EVCE and Cannabis as training topics on both a national and regional
555 basis. He stated that VT is in the process of planning for the eventual testing and inspection of EVCE and is working
556 through the legislative process for funding to purchase the testing equipment and additional staff. VT has made a
557 significant investment in expanding the number of EVCS and will continue to do so. VT also hopes to provide
558 consumer protection in regard to the sale of cannabis through inspections and package weighing of the product.

559 CWMA 2021 Interim Meeting: Mr. Charles Stutesman (KS) suggested the topic of gravimetric testing for conference
560 training as well as the topic of understanding fuel quality analysis.

561 **PMT – PROGRAM MANAGEMENT**

562 **PMT-1 I Safety Awareness**

563 One of the goals of the PDC is to educate jurisdictions on safety issues and to provide resources to help them
 564 implement effective safety and health management programs. The Committee intends to use the safety page at
 565 www.ncwm.com/safety as a place for states to share information and resources to help them address each of the
 566 major steps in creating and maintaining an effective safety program.

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

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

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

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

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

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

Safety Subcommittee Members		
Chair	John Bell	Missouri
Public Sector	Jason Flint	New Jersey
Public Sector	Mike Sikula	New York
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

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

586 **Regional Safety Liaisons:**

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

588 Mr. John Bell, Missouri Department of Agriculture

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

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

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

592 Vacant

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

594 Mr. Remy Cano, Northwest Tank & Environmental Services

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

Safety Article Schedule		
Issue 1 (February 2021)	CWMA	January 15, 2021
Issue 2 (May 2021)	NEWMA	April 15, 2021
Issue 3 (September 2021)	SWMA	August 13, 2021
Issue 1 (February 2022)	WWMA	January 15, 2022

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

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

603 **NCWM Meeting Comments:**

604 NCWM 2021 Interim Meeting: The 2021 Interim Meeting was held virtually and immediately following the
605 conclusion of the NCWM 2020 virtual meeting.

606 Mr. David Aguayo (San Luis Obispo, Co. CA) PDC Chair reviewed this item in the absence of the Safety
607 Subcommittee Chair, Ms. Lori Jacobson (SD). The Committee expressed appreciation to all the regional safety
608 representatives for their continued contributions. The CWMA Regional Safety Liaison position is currently vacant.
609 Individuals interested in serving in this capacity should contact the CWMA Chair or Board member.

610 The Committee expresses its appreciation to Ms. Brenda Sharkey (SD) who was the previous CWMA representative
611 for her work.

612 No comments were heard during the open hearing.

613 NCWM 2021 Annual Meeting: The 2021 Annual Meeting was held in an in person and online hybrid meeting session.
614 Mr. David Aguayo (San Luis Obispo Co., CA), Chair of the PDC reviewed this item due to the current vacancy of
615 the Safety Subcommittee Chair. The Committee appreciates the ongoing efforts of the regional safety liaisons for
616 their continued contributions to safety articles. The SWMA Regional Safety Liaison position remains vacant.

617 The Committee received no comments during the open hearing on this item.

618 **Regional Association Comments:**

619 WWMA 2021 Annual Meeting: During the 2021 WWMA Annual Meeting the following comments were received:
 620 David Aguayo, San Luis Obispo County, CA stressed the importance of safety and safety training and urged
 621 continuation of development of safety standards as new technologies such as electrification are implemented
 622 throughout the region and the country. Mr. Ivan Hankins, NCWM Chair, commented that Mr. Johnny Bell, MO has
 623 been appointed as the NCWM Safety Subcommittee Chair and stressed the importance of safety in the workplace.

624
 625 The Committee supports the continuation of the Safety Subcommittee and looks forward to future work with the new
 626 chairperson Mr. Bell.

627 SWMA 2021 Annual Meeting: Chairman, Paul Floyd (LA), requested a volunteer for the safety subcommittee from
 628 SWMA. Mr. Robert Huff (DE) has volunteered to take on that role.

629 NEWMA 2021 Interim Meeting: The committee chair expressed gratitude to the regional safety liaison Mike Sikula
 630 for his contributions to NCWM. The committee heard comments from Mr. Jimmy Cassidy (MA) encouraging the
 631 safety subcommittee to address safety concerns in the area of Cannabis. He stated questions and gave feedback
 632 including if respirators should be used by inspectors and what the risk of contamination may be with cross
 633 contamination especially as it relates to inspectors who may hold a Commercial Drivers Licenses. He stressed the
 634 importance of ensuring that inspectors can do this work in a safe manner.

635 CWMA 2021 Interim Meeting: Committee Chair, Ms. Elizabeth Lambert (MO), provided comment that Mr. John
 636 Bell (MO) has been appointed the position of Safety Subcommittee Chair. Mr. John Bell (MO) commented that
 637 members have the ability to refer to safety page on the NCWM website. He mentioned job site analysis forms are
 638 available from either himself or Don Onwiler (NCWM). Mr. Bell noted Missouri's Office of Administration is
 639 developing safety training for their state employees and is asking for material that may be beneficial to share. He also
 640 indicated that there is still a vacancy for the SWMA safety liaison position.

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

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

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

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

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

660 The SETG's mission to educate the membership and bring together all stakeholders in sharing information on
 661 skimming. The SETG recognizes that technology changes, include the devices used to steal debit and credit card
 662 information, the technology to prevent these thefts, and the criminals become more organized and sophisticated.

663 NCWM provides a powerful platform to bring together all stakeholders – state officials, law enforcement,
664 manufacturers, service companies, retailers, security providers and consumers.

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

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

670 1. Establish a library of resources for the public on the NCWM website. The resources will consist of videos,
671 articles, reports, checklists, contact information, best practices, and other information. The SETG recognized
672 that there may be some sensitive or proprietary data that should not be put on the public-facing website but
673 may be shared with the membership or a targeted group of the membership. Alternative distribution methods
674 would be determined and used in these cases. Communicating the availability and location of these resources
675 to the membership and beyond is an important element of the strategy and project.

676 2. Host presentations and briefings from subject matter experts at future NCWM meetings. The SETG is
677 planning to provide such a briefing at the Annual meeting in July 2021. The SETG is looking at 3 key
678 constituencies to provide presentations:
679 ○ Law enforcement - overview of the landscape of activity on skimming (e.g., U.S. Secret Service)
680 ○ Private sector security experts - to share what they are seeing and describe the types of technology
681 being used by the criminals and methods used to combat skimming
682 ○ Retail/industry - updates on the transition to EMV card readers, etc.

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

685 The SETG welcomes volunteers and encourages participation from all members. If you or your staff are interested,
686 contact Ms. Paige Anderson (NACS), Mr. John McGuire (NJ), members of the PDC, or the NCWM staff.

Skimmer Education Task Group Members		
Co-Chair	Paige Anderson	NACS
Co-Chair	John McGuire	New Jersey
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

687 **NCWM Meeting Comments:**

688 NCWM 2021 Interim Meeting: Meeting was held virtually and immediately following the conclusion of the NCWM
689 2020 virtual meeting. Ms. Kristin Macey (CA) indicated it has been invaluable to share lessons learned and techniques
690 on detecting skimmers. Sharing experiences with law enforcement agencies, including local and state law
691 enforcement, FBI, and Secret Service is helpful. Ms. Macey recommends the Task Group continue these
692 conversations. Ms. Cheryl Ayer (NH) shared that they worked with the Secret Service in November 2020 to inspect
693 dispensers in several cities. Ms. Ayer stated that New Hampshire fully supports the Skimmer Education Task Group.

694 NCWM 2021 Annual Meeting: The 2021 Annual Meeting was held in an in person and online hybrid meeting session.
695 Co-Chair of SETG, Mr. John McGuire (NJ) provided an update to the committee during open hearings. Mr. McGuire

696 provided information on SETG's recent meeting and their future efforts. On July 18, 2021, SETG met in Rochester,
697 NY during the NCMW 106th Annual meeting. The following is a summary of his remarks:

- 698 • SETG met on two separate occasions searching for a pathway to bring forward education and outreach
699 opportunities on skimmer issues from the weights and measures and law enforcement communities. With
700 the new User Requirement, U.R. 4.2 Security for Retail Motor-Fuel Devices (RMFD), the task group is
701 seeking to create a section under the resource tab on NCWM's website. This would serve as a central
702 repository dedicated to the dissemination of information for skimmer education and outreach. This would
703 provide a means to make available resources such as educational videos, a nationwide alert system, useful
704 forms and documents, and related trainings.
- 705 • Videos can be linked to online sources such as YouTube and other sites that share and provide information
706 on skimmers related to RMFDs. Videos and other related content can be exchanged with associate
707 members to educate and potentially provide innovative equipment used in the detection of skimmers.
- 708 • A nationwide alert system to all state directors for immediate notification when a skimmer is detected. The
709 SETG is working towards providing a link for immediate uploading of a detected skimmer to this system.
710 State directors and other authorized users would have the ability to upload information on skimmers,
711 including location of detection, make and model of the RMFD and related skimmer information such as
712 type (E.g., inlay, chip, or thumb drive) and photographs for visual content and clarity. The alert system
713 would be valuable to all jurisdictions in the education and deterrence of skimmers in RMFDs.
- 714 • A checklist that would assist in gathering pertinent information to be documented when a skimmer is
715 detected at a RMFD. The SETG is currently culminating information gathered by multiple jurisdictions to
716 provide a comprehensive checklist. Once finalized, the task group will submit to the PDC for further action.
- 717 • The SETG will be seeking material and presenters through industry partners, including law enforcement
718 officials to provide presentations on skimmers during future NCWM meetings. The focus of these
719 presentations will be to provide current updates, new methods of implementation, technology, and provide
720 resources to membership.
- 721 • The SETG will continue to move forward with these ideas to meet their scope and purpose. Updates on the
722 development of these items will be given by the SETG to the PDC.

723 WWMA 2021 Annual Meeting: During the 2021 WWMA Annual Meeting the following comments were received:
724 David Aguayo, San Luis Obispo County, CA commented this task group has determined next steps to consolidate best
725 practices in oversight and sharing of information. Because of the variation in the ongoing development of this item in
726 different parts of the country, it is important to share developing information across regions.

727 The Committee supports the continuation of this task group and looks forward to learning more from its future work
728 on its two goals established during the 2021 NCWM Annual meeting; 1) the establishment of a resource library on
729 skimmers, and 2) training and informational sessions from subject matter experts during subsequent meetings
730 throughout the year

731 SWMA 2021 Annual Meeting: Dr. Bobby Fletcher (LA) gave a report from the skimmer education task group stating
732 the subcommittee was compiling information on credit card skimmers.

733 NEWMA 2021 Interim Meeting: Mr. John McGuire (NJ) co-chair of the Skimmer Education Task Group (SETG)
734 gave an update on the groups progress. The SETG met for the second time at the Annual NCWM in Rochester, NY
735 (July 18-21, 2021), the group is in its starting phase. The SETG has outlined goals and will be seeking to use the PDC
736 as an ongoing platform for the group. The SETG will be proposing to use the Resource Tab, located on the NCWM
737 website, as a repository for Skimmer information. Items that can be posted on the Resource Tab include videos linked
738 to YouTube that can be used to educate regulators to assist in identifying skimmers and the equipment used in detecting
739 them. Additional goals of the SETG include developing a reporting process for jurisdictions to disseminate the
740 information using a nationwide Alert Tab when detecting a skimmer. The Resource Tab can be part of this process
741 to assist in providing related information including pictures and descriptions such as if a chip or thumb drive may have
742 been used. The SETG currently plans on having these goals formalized in time for the interim NCWM meeting in
743 January 2022 where they plan on utilizing the PDC platform at open hearings to educate and update attendees. Mr.
744 Jimmy Cassidy (MA) commented on the importance of the work of the SETG and noted significant interest for the
745 Skimmer Alert System proposal. He encouraged support for the Skimmer Alert System and for related funding that

746 might be needed for this initiative.

747 CWMA 2021 Interim Meeting: Mr. Mike Harrington (IA), member of the SETG, provided an update indicating that
748 during the NCWM 2021 Annual Meeting John McGuire (NJ), co-chair of task force group, mentioned the possibility
749 of having a presentation on skimmers at the NCWM Interim Meeting. Mr. Harrington commented that Shazam, a
750 network of ATMs has provided presentations and trainings in Iowa and is very knowledgeable in this area and they
751 may be available to present information at the next NCWM meeting. Charlie Stutesman (KS) suggested members
752 could reach out to Hal Prince (FL) for training opportunities as Florida has become a great resource for skimmer
753 education.

754 Additional letters, presentation and data may have been submitted for consideration with this item. Please refer to
755 <https://www.ncwm.com/publication-15> to review these documents.

756 Mr. Gary Milton, Virginia | Committee Chair
757 Mr. Scott Ferguson, Michigan | Vice-Chair
758 Mr. Paul Floyd, Louisiana | Member
759 Mr. Scott Simmons, Colorado | Member
760 Mr. Jim Pettinato, TechnipFMC | AMC Representative
761 Mr. John Bell, Missouri | Safety Liaison
762 Ms. Tina Butcher, NIST, OWM | NIST Liaison
763 Mr. Jerry Buendel, Retired | Certification Coordinator
764 **Professional Development Committee**

Appendix A

Summary of NIST OWM Training Conducted in 2019 (PDC Agenda Item EDU-2)

Summary of NIST OWM Training Conducted in 2019			
Area/Course Name	Start Date	Location	No. of Students
Laboratory Metrology			
Advanced Mass Seminar	04/29/19	Gaithersburg, MD	9
Balance & Scale Proficiency Testing	06/03/19	Gaithersburg, MD	8
Fundamentals of Metrology	03/04/19	Gaithersburg, MD	7
	03/11/19	Gaithersburg, MD	9
	03/18/19	Gaithersburg, MD	10
	08/05/19	Gaithersburg, MD	9
	08/19/19	Gaithersburg, MD	8
Mass Metrology Seminar	04/18/19	Gaithersburg, MD	9
	10/21/19	Gaithersburg, MD	10
Volume Metrology Seminar	08/12/19	Gaithersburg, MD	12
Regional Measurement Assurance Programs			
Combined Regional MAP	05/31/19	Lake Mary, FL	107
CRMAP Tutorial 1 – Balance & Scale Calibration Uncertainties	05/31/19	Lake Mary, FL	20
CRMAP Tutorial 2 – Calibration & Use of Thermometers	05/31/19	Lake Mary, FL	16
CRMAP Tutorial 3 – Workshop on Assessing & Reporting Uncertainties	05/31/19	Lake Mary, FL	16
Info Hours			
Info Hour – Annual Submission Process	08/20/19	Web-based	53
Info Hour – Mass Traceability at NIST in the revised SI	12/02/19	Web-based	83
Webinars			
Basic Uncertainty Concepts	04/24/19	Web-based	9
Calibration Certificate Evaluation	08/06/19	Web-based	5
Conducting an Effective Management Review	03/07/19	Web-based	10
Contract Review	08/15/19	Web-based	16
Document Control and Record Keeping	08/29/19	Web-based	14
Internal Auditing Best Practices	02/21/19	Web-based	6
	11/14/19	Web-based	8
Mass Calibration at NIST in the Revised SI	12/10/19	Web-based	83
Software Verification & Validation	04/11/19	Web-based	7
State Laboratory Annual Submission Process	09/12/19	Web-based	70
Packaging & Price Verification			
HB 130 – Uniform Pkg & Label Regs	10/28/19	Avenel, NJ	16
HB 133 – Checking the Net Contents of Packaged Goods, Basic	04/01/19	Gaithersburg, MD	10
	04/15/19	Glendale, AZ	18
	11/05/19	Santa Rosa, CA	16
HB 133 – Checking the Net Contents of Packaged Goods, Overview	10/16/19	Richmond, VA	27
Webinars			
HB 130 – Price Verification	06/18/19	Web-based	17
HB 130 – Uniform Pkg & Labeling Reg	06/19/19	Web-based	10

PDC 2022 Interim Meeting Agenda
Appendix A – Summary of NIST OWM Training Conducted in 2019

HB 133 – Pkg & Labeling Overview	09/03/19	Web-based (NJ W&M Assn)	75
Legal Metrology Devices			
Audit Trails – Overview	09/11/19	Park City, UT (WWMA)	75
Retail Motor-Fuel Dispensers – Short (3-day)	05/06/19	Canton, OH (CWMA)	24
	09/09/19	Park City, UT (WWMA)	13
Liquefied Petroleum Gas Liquid-Measuring Systems	06/24/19	Nashville, TN	16
Vehicle-Tank Meters & Loading-Rack Meters, Combined	06/10/19	Lawrence, KS	26
Webinars			
Audit Trails – Overview	09/04/19	Web-based (NJ W&M Assn)	75

NIST OWM Training Scheduled for 2020		
Area/Course Name	Dates	Location
Laboratory Metrology		
Advanced Mass Seminar	06/01/20	Gaithersburg, MD
Balance and Scale Calibration Uncertainties	01/27/20	Gaithersburg, MD
Balance and Scale Calibration Uncertainties – IAAO Participants Only	07/13/20	Gaithersburg, MD
Fundamentals of Metrology	02/03/20	Gaithersburg, MD
	02/10/20	Gaithersburg, MD
Fundamentals of Metrology – IAAO Participants Only	07/20/20	Gaithersburg, MD
Mass Metrology Seminar	03/02/20	
	10/19/20	Gaithersburg, MD
Volume Metrology Seminar	04/20/20	Gaithersburg, MD
Regional Measurement Assurance Programs		
Southeast Measurement Assurance Program	03/23/20	Frankfort, KY
Western Regional Assurance Program	05/04/20	Sparks, NV
Northeast Measurement Assurance Program	09/14/20	Hartford, CT
Southwest Assurance Program	09/28/20	Las Cruces, NM
MidAmerica Measurement Assurance Program	10/05/20	Indianapolis, IN
Webinars		
Basic Uncertainty Concepts	03/05/20	Web-based
Calibration Certificate Evaluation (2-day session)	01/23/20	Web-based
Conducting an Effective Management Review	02/13/20	Web-based
Internal Auditing Best Practices	02/27/20	Web-based
Measurement Systems for Legal Metrology	08/12/20	Web-based
Software Verification & Validation	02/20/20	Web-based
Packaging & Price Verification		
HB 130 – Uniform Packaging/Labeling Regs	05/18/20	Sacramento, CA
HB 133 – Checking Net Contents of Packaged Goods, Basic	05/04/20	Saratoga Springs, NY (NEWMA)
Webinars		
HB 130 – Price Verification	03/05/20	Web-based
	07/22/20	Web-based
HB 130 – Overview Packaging\Labeling Reg	03/26/20	Web-based

PDC 2022 Interim Meeting Agenda
 Appendix A – Summary of NIST OWM Training Conducted in 2019

	07/23/20	Web-based
HB 133 – Checking Net Contents of Packaged Goods - Overview	08/05/20	Web-based
Legal Metrology Devices		
High-Precision Scales	05/19/20	Wisconsin Dells, WI (CWMA)
Liquefied Petroleum Gas Liquid-Measuring Systems	06/08/20	Sioux Falls, SD
Retail Motor-Fuel Dispensers	05/11/20 (tentative)	[City TBD], LA
Vehicle and Axle-Load Scales	Fall 2020	Harrisonburg, VA
Vehicle-Tank Meters (by invitation only)	04/27/20	[City TBD], CA
Webinars		
Reading Test Measures & Provers	Spring/Summer 2020	Web-based

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
- 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

