

## National Type Evaluation Program (NTEP) Committee 2026 Annual Meeting Agenda

Mr. Marc Paquette, Committee Chair  
Vermont

### INTRODUCTION

The NTEP Committee (hereinafter referred to as the “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 the National Council 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 *NCWM Publication 14, Administrative Policy* and *NCWM Publication 14, Technical Policy, Checklists, Test Procedures*. Changes to *NCWM Publication 14, Administrative Policy* are by recommendation of the Committee and a majority vote of the Board of Directors. Changes to *NCWM Publication 14, Technical Policy, Checklists, Test Procedures* are by recommendation of the National Type Evaluation Committee (NTEP) sectors and a majority vote of the NTEP Committee. 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 *NCWM Policy 3.1.4. Handbooks, Procedures to Modify Handbooks*. 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**. Additional letters, presentations and data may have been part of the committee’s consideration. Please refer to [www.ncwm.com/publication-15](http://www.ncwm.com/publication-15) to review these documents.

All sessions are open to registered attendees of the meeting. 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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International.....	INT Series
Activity Reports.....	ACT Series
Conformity Assessment Program.....	CAP Series
NCWM Publication 14, Administrative Policy.....	ADM Series
Other Items.....	OTH Series

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

Acronym	Term	Acronym	Term
CC	Certificate of Conformance	NCWM	National Council on Weights and Measures
CIML	International Committee of Legal Metrology	NIST	National Institute of Standards and Technology
DoMC	Declaration of Mutual Confidence	NTEP	National Type Evaluation Program
IV	Initial Verification	OIML	International Organization of Legal Metrology
MAA	Mutual Acceptance Arrangement	OIML-CS	International Organization of Legal Metrology – Certificate System
MC	Measurement Canada	OWM	Office of Weights and Measures
MDMD	Multiple Dimension Measuring Devices	R	Recommendation
MRA	Mutual Recognition Arrangement	VCAP	Verification Conformity Assessment Program

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

1 **INT – INTERNATIONAL**

2 **INT-1 I Mutual Recognition Arrangement (MRA)**

3 The MRA between Measurement Canada (MC) and NTEP labs originated April 1, 1994. Since that time, the original  
4 MRA has expanded, and a second MRA covering measuring devices was developed. On July 20, 2021, NCWM  
5 Chair Hal Prince and Measurement Canada Acting President Nathalie Campeau signed a renewal MRA that  
6 provides for continued cooperation between the two organizations and continuation of the beneficial partnership. The  
7 new MRA will be effective for 5 years.

8 **The scope of the current MRA includes:**

- 9
- 10 • gasoline and diesel dispensers.
  - 11 • high-speed dispensers.
  - 12 • gasoline and diesel meters intended to be used in fuel dispensers and truck refuelers;
  - 13 • electronic computing and non-computing bench, counter, floor, and platform scales with a capacity  
14 up to 13 000 kg (2000 lb);
  - 15 • weighing/load receiving elements with a capacity of up to 1000 kg (2000 lb);
  - 16 • electronic weight indicating elements (except those that are software based, i.e., programmed  
17 by downloading parameters); and
  - 18 • mechanical scales up to 10 000 kg (20 000 lb).

18 MC, NTEP, and all our mutual stakeholders agree that the MRA is a benefit for the North American weights and  
19 measures industry. The NTEP Committee appreciates the efforts and cooperation of Measurement Canada and is  
20 working with MC to continue the cooperative arrangement.

21 The current agreement expires on July 26, 2026.

1 **INT-2 I OIML-Certification System (CS)**

2 Implementation of the (new) International Organization of Legal Metrology – Certification System (OIML-CS)  
3 officially began in January 2018, replacing the previous OIML MAA and basic certificate systems. NCWM signed  
4 the OIML MAA Declaration of Mutual Confidence (DoMC) for Recommendation (R) 60 “Load Cells” as a Utilizing  
5 Participant in 2006 and NCWM signed the OIML-CS Utilizer Declaration for R 60 in January 2018. A Utilizer is a  
6 participant in the system that does not issue any OIML Certificates of Conformance (CC) or OIML Test Reports but  
7 does utilize the reports issued by OIML-CS Issuing Authorities and Authorized Testing Laboratories.

8 Dr. Ehrlich serves on the Management Committee of the OIML-CS, and Mr. Gibson serves on the OIML-CS Review  
9 Committee. The US (NTEP) supports the OIML-CS process and has agreed to continue accepting OIML-CS R 60  
10 test data for load cells with the provision that any use of manufacturer test data is clearly identified on the test report  
11 section of the certificate because NTEP cannot use manufacturer test data towards issuance of an NTEP certificate.  
12 The OIML-CS criteria align with the NTEP Committee's recommendations, and the instructions provided by the NCWM  
13 Board of Directors.

14 Dr. Ehrlich has requested, on multiple occasions, that NCWM review its policy regarding participation in the OIML-  
15 CS (and previously participation in the OIML-MAA) for R76 (Non-Automatic Weighing Instruments). The NCWM  
16 has continued to follow a policy that was established in 2006 to not participate in R76 until NCWM can do so as an  
17 Issuing Authority. In 2016, the Board revisited the 2006 discussions leading to that decision, including considerations  
18 for NTEP labs’ workload, potential lost expertise, concerns with quality of evaluations at some foreign labs, etc. Since  
19 there were no new developments to affect its decision, the NCWM Board of Directors agreed to maintain existing  
20 policy. Dr. Ehrlich suggested that if there was no possibility in sight that the NCWM could become an Issuing  
21 Authority, then it should consider becoming a Utilizer for OIML R76 under the OIML-CS. Some U.S. manufacturers  
22 support current NCWM policy on this, but others would prefer a change.

23 The instruments under what is called “Scheme A”, where accreditation or peer review is required of the Issuing  
24 Authority and its Test Labs. In addition to R60 and R76, some of the instruments and systems in the OIML-CS that  
25 are probably of the most interest to NCWM members include: OIML R21 (Taximeters), R46 (Active Electrical Energy  
26 Meters), R49 (Water meters), R51 (Automatic catch-weighers), R59 (Moisture meters for cereal grains and oilseeds),  
27 R61 (Automatic gravimetric filling instruments), R85 (Level gauges for stationary storage tanks), R106 (Automatic  
28 rail-weighbridges), R117 (fuel dispensers and other liquid flow systems), OIML R129 (Multi-dimensional measuring  
29 instruments), and R137 (Gas meters).

30 With Dr. Ehrlich retirement Katya Delak has taken his role as the Program Leader for International Legal Metrology  
31 at NIST OWM with Isabel Chavez Baucom taking the role of the OIML Management Committee contact.

32 Information regarding the OIML-CS can be found at [www.oiml.org](http://www.oiml.org). Katya Delak and Isabel Chavez Baucom  
33 represent the U.S. interests in this work and regularly provides updates to the NCWM Board of Directors on these  
34 activities.

35 **ACT – ACTIVITY REPORTS**

36 **ACT-1 I NTEP Participating Laboratories and Evaluations Reports**

37 The NTEP laboratories/evaluators meeting will be held in March 2026 at the NTEP Laboratory in Columbus, Ohio.

38 NTEP continues to routinely survey customers pertaining to NTEP administration and laboratories customer service.  
39 The survey is released to active Certificate of Conformance (CC) holders. The NCWM Board of Directors routinely  
40 reviews the results of the survey to form a continuous improvement plan for NTEP. With any survey, the challenge  
41 is to develop a document that is concise enough that customers will respond, while also providing a meaningful set of  
42 data. To date, the NCWM Board of Directors is finding general approval of NTEP services.

43 The Committee reviewed NTEP statistics through September 2025. The review of statistics shows that incoming

1 applications have increased over previous years creating a manageable but increased evaluation backlog. While the  
 2 backlog is larger than in previous years, the application processing, evaluation times, and certificate issuing is  
 3 consistent with previous years. See Appendix A for NTEP statistics.

4 **ACT-2 I NTEP Sector Reports**

5 All NTEP Sector Reports are available to members at the time *NCWM Publication 15* is published. The NTEP  
 6 Committee is committed to ensuring electronic versions of sector reports are available with *NCWM Publication 15*.  
 7 Please note the sector summary reports will only be available in the electronic version of *NCWM Publication 15* and  
 8 at [www.ncwm.com/interim-archive](http://www.ncwm.com/interim-archive); they will not be available in printed versions of *NCWM Publication 15*.

9 **NTEP Weighing Sector:**

10 The NTEP Weighing Sector met on August 19-20, 2025, Refer to the Sectors web page for a copy of the meeting  
 11 summary. The next meeting is scheduled for August 18th and 19th. Refer to the Sectors web page for additional details.  
 12 For questions on the status of sector work or to propose items for a future meeting, please contact either the Chair  
 13 and/or the NTEP Administrator.

**Sector Chair**

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**NTEP Administrator**

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14 **NTEP Grain Moisture Meter and NIR Protein Analyzer Sectors:**

15 The Grain Moisture Sector was held on August 5, 2025. Refer to the Sectors web page for a copy of the meeting  
 16 summary. The 2026 meeting is scheduled for Tuesday, August 11, 2026, at the FGIS facility in Kansas City Missouri.  
 17 For questions on the status of sector work or to propose items for a future meeting, please contact the sector Chair  
 18 and/or the NTEP Administrator.

**Sector Chair**

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19 **NTEP Measuring Sector:**

20 The Measuring Sector met on September 16-17, 2025 refer to the Sectors web page for a copy of the meeting  
 21 summary . The 2026 Measuring Sector Meeting is scheduled for September 15-16, 2026, in conjunction with the  
 22 Software Sector. Refer to the Sectors web page for additional details. For questions on the status of sector work or to  
 23 propose items for a future meeting, please contact the sector Chair and/or the NTEP Administrator.

**Sector Chair**

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**NTEP Administrator**

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24 **NTEP Software Sector:**

25 A joint meeting of the Software and the Weighing Sector was held on August 20 - 21, 2025 refer to the Sectors web  
 26 page for a copy of the meeting summary. The next meeting for the Software Sector is scheduled in conjunction with  
 27 the Measuring Sector on September 16-17, 2026. Refer to the Sectors web page for additional details. For questions  
 28 on the status of sector work or proposed items for a future meeting, please contact the sector Chair and/or the NTEP  
 29 Administrator.

30

31

**Sector Chair**

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1 **NTEP Multiple Dimension Measuring Devices (MDMD) Work Group:**

2 The NTEP MDMD Work Group meeting was held on May 7th, 2025 refer to the Sectors web page for a copy of the  
3 meeting summary. The 2026 meeting is scheduled for May 6<sup>th</sup>. Refer to the Sectors web page for additional details.  
4 For questions on the status of work group or to propose items for a future meeting, please contact the sector Chair  
5 and/or the NTEP Administrator.

**Workgroup Chair**

Mr. Chris Senneff  
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6 **NTEP Electric Vehicle Supply Equipment (EVSE) Work Group:**

7 The NTEP EVSE Work Group has not met in several years. At the conclusion of the 2026 NCWM Annual Meeting  
8 it is anticipated that the Work Group will need to schedule a meeting to update the NTEP Evaluation Checklist to include  
9 any items adopted during the previous Annual Meetings. As the Work Group Meeting is not yet scheduled, please  
10 contact the Work Groups Chair and/or the NTEP Administrator for additional information:

**Workgroup Chair**

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11 **CAP – CONFORMITY ASSESSMENT PROGRAM**

12 **CAP-1 I Conformity Assessment Program**

13 The Conformity Assessment Program was established to ensure devices produced after the device has been type  
14 evaluated and certified by NTEP continue to meet the same requirements. This program has three major elements: 1)  
15 Certificate Review (administrative); 2) Initial Verification (inspection and performance testing); and 3) Verified  
16 Conformity Assessment (influence factors). This item is included on the Committee’s agenda to provide an update on  
17 these elements.

18 **Certificate Review:**

19 Certificates are constantly under review by NTEP staff and laboratories. Many active certificates are amended  
20 annually because of manufacturer submission for evaluation or issues reported by the states pertaining to information  
21 on the certificate. When the devices are re-evaluated and certificates are amended, all information is reviewed, and  
22 necessary steps are taken to ensure compliance and that accurate, thorough information is reported on the certificate to  
23 keep certificate information up to date, the Committee continues to offer an opportunity for active certificate  
24 holders to update contact information that is contained in the “Submitted By” box on certificates. This is offered  
25 during the payment period of their annual maintenance fee. Many CC holders have taken advantage of the opportunity  
26 for hundreds of NTEP certificates.

27 **Initial Verification (IV):**

28 The IV initiative is ongoing. Field enforcement officials perform an initial inspection and test on new installations on  
29 a routine basis. The Committee recognized that the states do not want IV reporting to be cumbersome.

30 An IV report form was developed several years ago. The Committee desired a simple form, perhaps web-based for  
31 use by state and local regulators. The form was approved by the Committee and distributed to the states. A completed

1 form can be submitted via mail, e-mail, fax, or online. The forms are available on the Conformity Assessment Program  
 2 web page at [www.ncwm.com/conformity-assessment](http://www.ncwm.com/conformity-assessment), or on the Forms web page at [www.ncwm.com/helpful-forms](http://www.ncwm.com/helpful-forms),  
 3 or by contacting the NCWM at [info@ncwm.com](mailto:info@ncwm.com) or the NTEP Administrator at [jeff.gibson@ncwm.com](mailto:jeff.gibson@ncwm.com).

4 NTEP has acknowledged that the state, county, and city regulators have not bought into the IV report form. Industry  
 5 representatives stated that IV is very important to ensure conformity assessment and the NCWM should push harder  
 6 for reporting of non-compliance issues found during IV.

7 NTEP is open to suggestions on how to improve the reporting of non-compliant devices found during initial  
 8 verification.

9 **VCAP:**

10 NCWM has been concerned about production meeting type and protecting the integrity of the NTEP Certificate of  
 11 Conformance (CC) since the inception of NTEP. The NCWM Board of Directors has consistently reconfirmed its  
 12 belief that conformity assessment is vital to NTEP’s continued success.

13 Nine weighing device categories subject to influence factors, as defined in *Handbook 44*, were identified and are  
 14 subject to VCAP audits. Certificate holders for these device types are required to have an on-site audit of the  
 15 manufacturer’s quality system and random on-site and/or review of a production device by an outside auditor to verify  
 16 compliance with VCAP. The NTEP Committee and NCWM Board agreed not to include weighing/load receiving  
 17 elements using NTEP load cells in the list of device categories subject to VCAP. However, the Board notified  
 18 certificate holders that they have no intention of amending the table of devices subject to influence factor testing found  
 19 in the Weighing Devices Section of *NCWM Publication 14*.

20 The Committee has received letters, questions, and many other inquiries pertaining to VCAP. The Committee has  
 21 worked diligently to answer the questions submitted in a very timely manner. The Committee knows that additional  
 22 questions will be posed as VCAP progresses. Certificate holders and other interested parties are encouraged to submit  
 23 written questions to the NTEP Committee. The Committee is pleased to report that it has been successful in answering  
 24 all the questions to date. Clerical changes and additions have been made to affected VCAP documents as deemed  
 25 necessary.

26 Load cells traceable to NTEP certificates were selected for the initial assessment effort. NCWM elected to require a  
 27 systems audit checklist that is to be completed by an outside auditor and submitted to NCWM per Section 21.3.3.3.5  
 28 of the VCAP requirements. A VCAP Systems Audit Checklist for Manufacturers and a VCAP Systems Audit  
 29 Checklist for Private Label Certificate Holders have been developed and are available on the website at  
 30 [www.ncwm.com/vcap](http://www.ncwm.com/vcap). Additionally, the Committee developed a new *NCWM Publication 14*, Administrative policy  
 31 to distinguish between the requirements for parent NTEP certificate holders (21.3.2) and private label certificate  
 32 holders. The requirements in 21.3.3.7 track the private label checklist requirements: traceability of the private label  
 33 NTEP CC to its parent NTEP CC, traceability of the parent NTEP CC to a VCAP audit, purchase and sales records,  
 34 plan to report non-conforming product and non-conforming product in stock, plan to conduct internal audits to verify  
 35 non-compliance action, and internal audit records.

36 **VCAP Audits:**

37 The Committee had discussions about the required number of audits for facilities that manufacture multiple device  
 38 types. For example, if a company had successful audits for two device types, they might submit a request for a delay  
 39 from audit requirements for remaining device types, stating that they are all subjected to the same processes and will  
 40 be audited in the next cycle. The Committee agreed to the request in principal and directed the NTEP Administrator  
 41 propose a change to the VCAP Policy language. This change was adopted by the NCWM Board in 2013.

1 **ADM – NCWM PUBLICATION 14, ADMINISTRATIVE POLICY**

2 **ADM-23.1 W Acceptance of OIML-CS Test Reports Issued for Devices Evaluated to the**  
3 **OIML R117 Recommendation for Issuing NTEP Certificates of**  
4 **Conformance.**

5 **Source:**

6 Meter Manufacturers Association

7 **Purpose:**

8 Recommend that NCWM enter into the OIML-CS for OIML R117 as a Utilizer, thus allowing NCWM to accept test  
9 reports for the purpose of issuing NTEP Certificates of Conformance for liquid measuring devices. NTEP will specify  
10 in its Declaration any additional national requirement in the U.S. for liquid measuring devices. All NTEP fees still  
11 apply and additional evaluation may be required at the discretion of the NTEP Administrator. 16

12 **Item Under Consideration:**

13 Amend Pub 14 Administrative Policy as follows.

14 **7.2. Certification System (OIML-CS)**

15 The International Organization of Legal Metrology Certification System (OIML-CS) is a voluntary  
16 system by which national issuing authorities or national responsible bodies within OIML Member  
17 States and Corresponding Members accept and utilize OIML Test Reports or OIML Type  
18 Evaluation Reports, for type approval or recognition in their relevant national or regional  
19 metrological control programs.

20 The United States is a Member State in OIML and therefore is able to participate in the OIML-CS.  
21 The U.S. State Department has designated NIST, OWM to represent the U.S. in OIML. NIST, OWM  
22 has identified NCWM as the National Issuing Authority for the U.S. for OIML R76 (nonautomatic  
23 weighing instruments) and OIML R60 (metrological regulation for load cells) because NCWM  
24 administers NTEP. NCWM is also the National Issuing Authority for other weighing and measuring  
25 devices in the US. The NCWM is the active National Issuing Authority for R60 in a Declaration  
26 under the OIML-CS.

27 By signing a Declaration, a National Issuing Authority declares confidence in the test results issued  
28 by Testing Laboratories that are designated by OIML Issuing Authorities under the OIML-CS.  
29 Participants in the OIML-CS are of two kinds:

- 30 1. OIML Issuing Authorities, which issue OIML Certificates and associated Type Evaluation  
31 Reports (they will provide evidence of competence, impartiality and quality).
- 32 2. Utilizers, which do not issue OIML Test Reports, but which accept OIML Test Reports or OIML  
33 Type Evaluation Reports as the basis of issuing corresponding National Type Evaluation  
34 Certificates.

35 NCWM has entered into the OIML-CS for OIML R60 **and R117** as a Utilizer, thus allowing  
36 NCWM to accept test reports for the purpose of issuing NTEP Certificates of Conformance for  
37 load cells **and dynamic measuring systems for liquids other than water**. [Note: NCWM had  
38 previously participated in the Mutual Acceptance Arrangement (MAA) for OIML R60 load cells. The  
39 Certificate System replaced the MAA.] NTEP has specified in its Declaration that there is an  
40 additional national requirement in the U.S. for Class III L. All NTEP fees still apply, and additional  
41 evaluation may be required at the discretion of the NTEP Administrator.

42 **Additional Information:**

43 Per Pub 14 Administrative Policy, NCWM has the ability to enter into the OIML-CS for declaring its acceptance of a

1 test report(s), issued by an authorized testing laboratory, based on the evaluation of a device to the OIML R117  
2 International Recommendation as a Utilizer, thus allowing NCWM to accept test reports for the purpose of issuing  
3 NTEP Certificates of Conformance for liquid measuring devices.

4 Before this proposal is considered, a work group would need to be formed and charged with documenting any  
5 requirement that is currently in the Publication 14 Checklist that is not in the R117 recommendation. This document  
6 would be included in the declaration of additional national requirements in the U.S. The OIML-CS test report would  
7 need to include the results of the evaluation to these additional national requirements. (Note, once the differences are  
8 identified, OIML-CS Test Laboratories should be contacted for their agreement and confirmation of capabilities to  
9 perform the additional testing, if any.) If OIML-CS Test Laboratories are unable to perform all tests specified in  
10 Publication 14 Checklist, the additional tests will be performed by NTEP.

11 The submitter provided the following information on possible opposing arguments to this proposal.

12 **Opposing Argument 1: This might take work away from NTEP labs.**

13 Rebuttal:

- 14 • NTEP labs are not always available for required testing.
- 15 • There might not be test facilities readily available in the US.
- 16 • NTEP labs would still need to review test reports and conduct gap analysis to HB44 and possibly  
17 conduct additional tests.
- 18 • This proposal would reduce NTEP travel expenses, which would benefit the manufacturers and  
19 NTEP labs.
- 20 • This proposal would reduce the test cost for manufacturers, and these savings can be passed on  
21 to the end user/public.

22 **Opposing Argument 2: This might allow unscrupulous manufacturers to sell products to US**  
23 **consumers.**

24 Rebuttal:

- 25 • OIML-CS system is a well-defined and strictly controlled system with qualified and  
26 certified testing authorities.
- 27 • Only OIML-CS test reports are eligible for submission to NTEP, and it will be still NTEP's  
28 decision which tests reports are acceptable based on the HB44 requirements.
- 29 • Test reports can be accepted in full or in part. In the latter case, additional tests by NTEP may be  
30 required. 30

31 **NCWM 2023 Annual Meeting:** The Committee received comments from two manufacturers and a representative of  
32 the Meter Manufacturers Association in support of the item and offered any support needed to move this item along.

33 **NCWM 2024 Interim Meeting:** The Committee heard support for this item from Dmitri Karimov representing the  
34 Meter Manufacturers Association. Mr. Karimov stated that the members of the Meter Manufacturers Association  
35 were willing to participate in any work necessary to develop a gap analysis document. The Committee also heard  
36 support for this item from Michael Keilty from Endress + Hauser Flowtec, AG, USA.

37 **NCWM 2024 Annual Meeting:** Dmitri Karimov, IDEX Energy supported the item and mentioned that there is strong  
38 support for the item from NIST-OWM. Dmitri commented that this would result in lower cost for manufacturers, and  
39 quicker time to market. Acceptance of the OIML data is voluntary, and NTEP would have the option of not accepting  
40 the test data if they did not want to. Not all data will be accepted as there are differences between NIST HB44 and  
41 OIML, such as permanence testing which will result in the need for some NTEP testing. Dmitri speaking for the Meter  
42 Manufacturers Association stated that the Meter Manufacturers Association supports this item. Michael Keilty,  
43 Endress + Hauser Flowtec, AG, USA; supported the item and commented that it is becoming harder for manufacturers  
44 to participate in the marketplace; it is difficult to find labs that do material-specific testing. NTEP and OIML are both  
45 needed and recognizing international data is important to manufacturers. Marc Buttler Emerson – Micro Motion  
46 supports the proposal and feels it adds value to the manufacturer. He commented that additional NTEP

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- 1 requirements can still be applicable. John Hathaway, Murry Equipment: In general, supports the proposal. However,  
2 he is concerned that some products have been evaluated and approved in other countries that are not to the level  
3 of their peers. He recommends that NTEP scrutinize new products from overseas before they are entered into the US  
4 Market.
- 5 **NCWM 2025 INTERIM MEETING:** The committee heard support and opposition to this item during open hearing  
6 testimony. John Hathaway Total Control is concerned about the item; there are some positives and negatives, but the  
7 negatives outweigh the positives. NTEP procedures during testing if OIML is used. Dimitri Karimov liquid controls  
8 support passing. Dimitri Karimov Liquid Controls wants NTEP to review the data and decide whether to accept or  
9 decline. Liquid Controls views it as a bonus for NTEP. California wants to withdraw and needs to remain NTEP. Jim  
10 Pettinato Guidant supports the item, which will benefit NTEP. Michael Keilty Endress & Hauser Flowtec, AG, USA  
11 support items, makes items easier to test, and does not stop “hands-on” testing from NTEP.
- 12 **NCWM 2025 ANNUAL MEETING:** Dimitri Karamov - Liquid Controls In Support. John Hathaway - Murray  
13 Equipment - Against. Discourages NTEP & Board from adopting OIML. Expressed concerns that there are questionable  
14 products being approved by OIML. These substandard products could enter U.S. markets. Keep the robust U.S.- based  
15 testing and approval system with NTEP. Michael Kielty, Endress+Hauser, in Support Mass flow meters for Cryogenic  
16 liquids face difficulties finding labs capable of testing. MFM for high-capacity oil and high flows also face challenges.  
17 Recommend accepting OIML data by applying scrutiny and only recognizing specific labs that have been vetted for  
18 quality and accuracy. Supports this item although he would assume that NTEP would continue to test, however NTEP  
19 could utilize OIML labs for new products. NTEP could endorse labs that offer testing on devices that NTEP does not  
20 cover
- 21 National Propane Gas Association in Support. LPG is not a significant enough market to warrant cost of NTEP testing  
22 for current manufacturers of propane gas meters. OIML approval can fill the gap to support limited U.S. market.
- 23 Alison Wilkinson - Maryland Dept. Ag. Neutral. Stated that NCWM needs to protect NTEP stated that she sees both  
24 points being made. It is critical to ensure the integrity of the NTEP program and suggested further evaluations be done  
25 regarding the proposal.
- 26 **NCWM 2026 INTERIM MEETING:** Jim Petalano – Guidant Measurement. Encourages committee to allow  
27 OIML certificates to be considered as part of the NTEP process.
- 28 Alison Wilkinson – MD; Different regulators would accept different things. If OIML is accepted, then unify what is  
29 accepted and expected to be evaluated. Before deciding, committee should consider what data is going to be  
30 accepted.
- 31 John Hathaway – Murray Equipment: Strongly against this item. NTEP evaluators can travel to OIML sites to  
32 observe testing rather than just accepting data.
- 33 Michael Keilty – Endress + Hauser; Didn’t think NTEP would ever allow certification based solely on OIML  
34 certificate but rather look at the data and expand the NTEP certificate. It would be beneficial to ask NTEP to  
35 evaluate data from OIML for larger unique devices.
- 36 Jim Pettinato – allow OIML certs
- 37 Allison Wilkinson, Maryland - Unify what would be accepted. BOD should have data on what would be accepted.
- 38 John Hathaway, Murry Equip strongly against this item. NTEP may travel to OIML sites to observe testing and not  
39 just accept certs.
- 40 Michael Kelty, Endress + Hauser Flow USA – Never thought NTEP would issue a cert based on OIML certs.  
41 Though NTEP would look at the data.
- 42 Jim Pettinato from Guidant: Encourage NTEP to be a utilizer.

1 Alison Wilkinson from MD: discussed in measurement sector. Different reps had diff understanding on what to  
2 accept. Should unify exactly what is accepted to issue a certificate.

3 John Hathaway from Murray Equip: strongly against and encourages NTEP to not adopt. NTEP evaluators can  
4 travel to OIML sites to observe testing. Better way to move ahead with evaluations instead of accepting certificate  
5 data.

6 Michael Keilty from Endress Hauser: didn't understand expectations, never thought that NTEP would sole issue a  
7 certificate based on OIML test report fully. He thought they would be able to look at data and the data would lead to  
8 expansion of the certificate to give a basis. EX: flow meters, very difficult to find lab that will test a 12" meter that s  
9 running a lot of products. Small er meters are good in the US. It is valuable to ask NTEP to review the data.  
10 Disconnect: should NTEP be required to take the whole test report to issue a certificate.

11  
12 Jim Pettrinato Guidant Measurement Supports adoption, MD should consider what this will do, John Hathaway  
13 Murray Equipment strongly against proposal do not adopt, Michael Kelity Enderson Hauser assumed NTEP would  
14 look at data before issuing CC supports item,  
15

16 This item was recommended by the NTEP Committee to move to the NCWM BOD for a vote during the 2026  
17 Spring Board of Directors/NTEP Committee meeting the item was rejected and has been withdrawn.

## 18 **ADM-24.2 W Implement Software Version Change Policy**

19 **Source:**  
20 NTEP Administrator

21 **Purpose:**  
22 To develop a new Policy Statement and Application for informing NTEP of an update to metrological features and/or  
23 functions in the software of an NTEP certified device or software-only application where the change modified the  
24 Software Version Identification.

25 **Justification:**  
26 Prior to January 2022 Handbook 44, General Code, paragraph G-S.1. (d) required that all not-built-for-purpose,  
27 software-based devices manufactured beginning on January 2004 must identify the software version or revision  
28 number. NTEP has been including the software version identifier on CCs issued to not-built-for-purpose, software-  
29 based devices after this date.

30 On January 2022 this paragraph was amended to require all software-based devices to have a software revision or  
31 version identifier. NTEP has been including the software version identifier on CCs issued to all software-based devices  
32 after this date.

33 It did not take very long to realize that manufacturers are not submitting an application when the software version  
34 changes and soon the version identifier list of the certificate was in question. One solution was to use the term “or  
35 higher” which was adopted in 2004. However, this has only led to confusion and concern in the field. Devices were  
36 found with a different version format than what was listed on the Certificate of Conformance. During some research,  
37 NTEP learned that the “higher” version identifier actually represented metrological changes being made to the device  
38 without notifying NTEP of the change.

39 The following proposal is an attempt to change the current practice and bring control to the software version  
40 Identification issue.

41 In support of this new policy, a new “Software Version Identifier Update” application has been created. There will be  
42 a fee associated with this application with the amount to be set by the NCWM Board of Directors.

43 **Item Under Consideration:**  
44 In Publication 14, NTEP Administrative Policy – insert the following new policy statement as section 15 and

1 renumber all remaining sections.

2 **15. Maintaining the Latest Software Version Identifier on the NTEP Certificate of**  
3 **Conformance**

4 **All NTEP Certificates of Conformance issued to all software-based devices after January 1,**  
5 **2022, have the software version identifier listed. It is imperative that you inform NTEP of**  
6 **any change to the version identifier that indicates a change to the software related to the**  
7 **metrological features and/or functions of the device. Devices found in the field, in a commercial**  
8 **or legal-for-trade application, with a metrological software version identifier not listed on the**  
9 **certificate of conformance for the device, will be considered not traceable to the Certificate of**  
10 **Conformance and subject to actions by the local weights and measures jurisdiction.**

11 **To inform NTEP of the change to the software version identifier, complete and submit a**  
12 **completed Software Version Identifier Update Application.**

13 **The intent of this policy is to amend the Certificate of Conformance to list all NTEP certified**  
14 **software version identifiers for the device or devices listed on the Certificate of Conformance.**  
15 **NTEP will provide the manufacturer with a draft of the amended Certificate of**  
16 **Conformance for their review and approval before the Certificate of Conformance is released**  
17 **for publishing. The manufacturer needs to be aware that the review of the software changes**  
18 **could lead to the need to have the device reevaluated.**

19 **NCWM 2024 Interim Meeting:** The Committee heard comments from Michael Keilty from Endress + Hauser  
20 lowtec, AG, USA, that NTEP should define how the software version control is represented so that there is similarity  
21 across device types. Similar comments were heard from Steven Harrington, Oregon, and Keith Bradley, Squire Patton  
22 Boggs. Mr. Bradley also mentioned that there could be a conflict with the proposed wording; in the second sentence,  
23 it identifies the software in question to be the software related to the metrological features and functions of the device,  
24 while in the fourth sentence, the term “software” is not defined as being metrological software. Darrell Flocken, NTEP  
25 Administrator, mentioned that this item is a clarification of an existing NTEP Policy requirement and suggested that  
26 the output of the Software Sector has provided some guidance for this in Publication 14, Software Sector. Darrell also  
27 agreed with the conflict in the proposed wording and added the word “metrological” into the fourth sentence.

28 **NCWM 2024 Annual Meeting:** The Committee heard from Michael Keilty, Endress + Hauser Flowtec, AG, USA;  
29 Michael identified a typo in the third sentence of the proposal and commented that he looks forward to discussing  
30 this item in more detail at the Measuring Sector Meeting in September.

31 **Devices found in the field, in a commercial or legal-for-trade application, with a**  
32 **metrological software version identifier not listed on the certificate of conformance for the**  
33 **device, will be considered not traceable to the certificate of conformance and subject to**  
34 **actions by the local weights and measures jurisdiction.**

35 Dmitri Karimov, IDEX Energy, voiced concerns regarding the additional work this proposal would create for NTEP.  
36 With the potential of 100’s of applications per month, he is concerned that this would create a backlog for NTEP  
37 which could cause delays in the manufacturer releasing new software versions. Michael Keilty voiced his concern that  
38 the proposed language would trigger a revision to the certificate. Michael went on to explain that Measurement Canada  
39 responds to software changes by issuing a letter of approval, they do not amend the certificate. He added that this  
40 would create undue expenses and burden NTEP with additional work and he does not like that an application is needed  
41 for every little change. Marc Buttler, Emerson – Micro Motion suggested that a list of all software versions, both past  
42 and present, be listed. Measurement Canada currently maintains a record of all certificate revisions.

43 **NCWM 2025 Interim Meeting:** Dmitri Karimov Liquid Controls is indifferent and wants the process to be quick.  
44 Michael Kely supports the change and wants it well thought out. California supports helping clarify software  
45 validation. The software sector supports this. Maryland supports items that will help states with enforcement. Murray  
46 Equipment supports, and Gilbarco supports.

- 1 **NCWM 2025 Annual Meeting:** Michael Keilty – Endress + Hauser – Supports the concept but NTEP might want to  
2 consider the program used in Canada. A simple change could be a letter which would be adequate to address this and  
3 should be offered at a reasonable cost.
- 4 Justin Wilson ChargePoint. Neutral. Concerns about implementation. Suggests a delayed implementation for  
5 manufacturers to prepare. Field devices have a wide variety of software environments. Need a process to make  
6 software modifications without a full CoC review again.
- 7 Alison Wilkinson Strongly support this item. Have found multiple flaws in software where metrological changes are  
8 occurring. New models are being introduced without review. Urge other states to review CoCs more closely has seen  
9 multiple problems. We should all be ensuring that devices are complying.
- 10 Matt Douglas. Supports comments from MD. Need to identify portion of software code (version number) that is  
11 allowed to increase without creating a sealable event or need to update certificate.  
12
- 13 **NCWM 2026 Interim Meeting:** Jim Pettinato – Software sector chair: This is a reasonable thing to implement.  
14 Shouldn't be software updates that affect things. Need clarity on what the difference is going to be regarding firmware  
15 updates versus hardware updates.
- 16 Alison Wilkinson – MD; MD is vigilant with reviewing software to ensure no metrological changes have been  
17 made. With different units of measurements, what they found is that the first number has incremented. They  
18 experience pushback from manufacturers when discussing software updates. This is an issue in the field. The  
19 metrological parameter version number should be the first number, and any additional following number increases  
20 would not require reevaluation by NTEP. Companies are making changes without notifying NTEP. Move forward  
21 with this item. Supports.
- 22 John Hathaway – Murray Equipment: Understands the desire and supports this item. What will NTEP and inspectors  
23 be looking for? Wants to see some details in writing, such as which number can be changed with software versions.
- 24 Brent Price – Gilbarco: Curious about fees and when it would be implemented.
- 25 Matt Douglas – CA: Agrees w/ MD. Inspectors need to be able to verify that version numbers on devices are  
26 compliant with the existing NTEP certificate. Has seen many variations of version number formats. Makes it  
27 difficult for inspectors.
- 28 Michael Keilty – Endress + Hauser: Supports and wants the committee to look at Measurement Canada as a model.
- 29 Jim Pettinato, Software Sector Chair – was discussed at Sector. Understand issues. Need clarity on differences on  
30 evaluations.
- 31 Allison Wilkinson, Maryland – Some inspectors are more vigilant on inspecting software versions. Strongly urge to  
32 move forward.
- 33 John Hathaway, Murry Equipment - Understand the need. Supports. Looking for guidance on where NTEP will be  
34 looking for software versions.
- 35 Brent Price, Gilbarco – When would NTEP anticipate implement change.
- 36 Matt Douglas, California – Agrees with Maryland. Needs to be able to identify software version on NTEP type  
37 evaluation.
- 38 Michael Keilty, Endress + Hauser Flow USA – supports software tracking. Fully support item
- 39 Jim Pettinato Software Sector Chair: Consensus that this is a reasonable thing to do. Needs clarity on what the  
40 difference is between firmware eval and whole device eval.

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1 Alison Wilkinson from MD: MD is vigilant on software on reviewing the version numbers and there are no  
2 metrological parameter changes. Certificates say version# "or higher". Found softwares are not traceable to the  
3 certificates. Software is are not being NTEP approved. Version 1.x.x.x, get rid of "or higher". First number should  
4 be the metrological parameters, the rest of the numbers would be other things. Noticing software changes that do not  
5 comport with the certificate. Urge that this go forward.

6 John Hathaway from Murray Equip: Understands the desire and need, supported by Murray and rest of MMA.  
7 Looking for guidance where NTEP and the state inspectors will be looking for the software versions and acceptable  
8 formats. Volunteers Murray equipment staff to assist.

9 Brent Price from Gilbarco: what are the fee structures? NTEP committee will make a decision at the next BOD,  
10 implementation after.

11 Matt Douglass from CA: agree with MD. Inspectors need to be able to identify version numbers and they are  
12 covered by the evaluation. Must be clearly expressed. "or higher" is not always clear. Manufacturer had letters and  
13 numbers. W at end on the certificate but a C in the middle out in the field.

14 Michael Keilty from Endress Hauser: fully supports software tracking. Measurement Canada has robust system.  
15 ISO has methods. Identification of software is difficult. Metro software isn't separate from other parts of software.

16 This item was recommended by the NTEP Committee to move to the NCWM BOD for a vote during the 2026  
17 Spring Board of Directors/NTEP Committee meeting the item was accepted and will no longer appear on the report.

18 **ADM-25.1 I Addition of Water Meters to the Verified Conformity Assessment Program**

19 **Source:**  
20 NTEP Administrator

21 **Purpose:**  
22 Modify the current Verified Conformity Assessment Program Policy to include water meters in the list of covered  
23 devices.

24 **Justification:**  
25 California has reported a high failure rate related to the performance of NTEP-certified water meters. The Verified  
26 Conformity Assessment Program is designed to require additional in-house testing and document verification to show  
27 proper control of design changes and component purchasing guidelines. By adding these devices to the Verified  
28 Conformity Assessment Program, NTEP would perform audits to ensure continued compliance. This will result in  
29 fewer failures during the initial verification inspection.

30 **Item Under Consideration:**  
31 Amend Pub 14 Administrative Policy as follows.

32 **21.1.3. NTEP Verified Conformity Assessment Program Procedures**  
33 Many NTEP-certified devices must meet *NIST Handbook 44* requirements for  
34 influence factors. It is not possible to verify these requirements during the Initial  
35 Verification in the field. Therefore, manufacturers of metrological devices  
36 (instruments) and/or components (modules) which are ~~subject to influence factors,~~  
37 ~~as defined in *NIST Handbook 44* identified in paragraphs 21.1.3.1., and 21.1.3.7,~~  
38 must have a Verified Conformity Assessment Program (VCAP) in place to ensure that  
39 these metrological devices and/or components are produced to perform at a level  
40 consistent with that of the device and/or component previously certified. The Verified  
41 Conformity Assessment Program audit will be at one or more sites as required to verify  
42 compliance.

43 For weighing devices that are subject to influence factors and other devices identified

1 **in paragraphs 21.1.3.1., and 21.1.3.7,** NTEP will require an initial on-site audit of the  
 2 manufacturer’s quality system and on-site random testing and/or review of a production  
 3 device(s) (instrument(s)) by the Registrar to verify that all items listed below are  
 4 currently implemented and functioning to verify compliance to the appropriate sections  
 5 of *NIST Handbook 44*.

6 ...

7 **21.1.3.1.Devices that Must Meet this Requirement are Limited to the List Below:**

- 8 • Load Cell (T.N.8.)
- 9 • Indicating Elements (T.N.8.)
- 10 • Weighing/Load Receiving Elements 2000 lb capacity and less with non-NTEP Load Cells (T.N.8.)
- 11 • Complete Scales 2000 lb capacity and less (T.N.8.)
- 12 • Automatic Weighing Systems 2000 lb capacity and less (T.7.)
- 13 • Belt-Conveyor Scales (weigh-belt systems only) 2000 lb capacity and less (T.3)
- 14 • Automatic Bulk Weighing Systems 2000 lb capacity and less (T.7.)
- 15 • Multiple Dimension Measuring Devices (T.5.1.)
- 16 • Grain Test Scales (T.N.8)
- 17 • **Water Meters**

18 **21.1.3.7.Devices that Must Meet this Requirement are Limited to the List Below:**

- 19 • Load Cell (T.N.8.)
- 20 • Indicating Elements (T.N.8.)
- 21 • Weighing/Load Receiving Elements 2000 lb capacity and less with non-NTEP Load Cells (T.N.8.)
- 22 • Complete Scales 2000 lb capacity and less (T.N.8.)
- 23 • Automatic Weighing Systems 2000 lb capacity and less (T.7.)
- 24 • Belt-Conveyor Scales (weigh-belt systems only) 2000 lb capacity and less (T.3)
- 25 • Automatic Bulk Weighing Systems 2000 lb capacity and less (T.7.)
- 26 • Multiple Dimension Measuring Devices (T.5.1.)
- 27 • Grain Test Scales (T.N.8)
- 28 • **Water Meters**

29 **NCWM 2025 Interim Meeting:** Los Angeles County supports the item, they have a 20% failure rate, and the State  
 30 of California supports the item, meters have a high failure rate. San Diego County's high failure rate has data; Dimitri  
 31 Liquid Controls does not support it; Orange County supports adding water meters to VCAP.

32 **NCWM 2025 Annual Meeting:** Dimitri Karamov, Liquid Controls, Opposed - recommend withdrawal. Methods for  
 33 testing are not consistent. Different labs will pass some devices that other labs failed. MMA Sending Comments

34 Badger Meter – submitted letter recommending withdrawal. Represents American water works. Submitted a letter  
 35 suggesting withdrawn status. If VCAP is implemented, then the meters will just pass again when tested at the  
 36 manufacturers site He stated that water meters don’t fall under normal weighing and measuring devices.

37 Michael Kielty, Endress+Hauser. In opposition recommend withdrawal. It is unclear whether the problem is not in the  
 38 lab procedure. Instead of doing this, first we should evaluate where the problem is. Visit manufacturers sites informally  
 39 to figure out where the problem is. This won’t resolve the issue.

40 Jose Arriaga, Orange County CA. Support. Will accept verified data from other labs. Orange county alone has over 1  
 41 million meters. Not addressing this keeps the burden on the service agents and users of the devices. Would like to see  
 42 data from other states who are testing water meters. This is a big issue. Large number of failures right out of the box.  
 43 Uniform testing procedures are being followed. This could be a nationwide issue.

44 Matt Douglas, State of California. Support just in one county (Orange) has witnessed a large number of failures.

45 Lina Ng, Los Angeles County, California. In Support. Echoes comments from Orange County and State of California.

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1 Personal experience with testing the meters. Sometimes brand-new shipments don't even meet marking and sealing  
2 requirements from NTEP. Lots of problems with brand new, aside from the performance accuracy.

3 John Bell, Ventura County, California. In Support. Water use is critical in California. Water meters have had major  
4 issues for ten years. This measure is a good start to address the issues. Worked as an inspector and saw the same  
5 problem with water meter failures. CA laws encourage more efficient water use. This can also affect other states. This  
6 item is a good start to get more consistency with water meters.

7 Austin Shepard, San Diego County, California. In Support. Echoes statements from other California counties and the  
8 State. San Diego County met with water manufacturers and established the same test procedures in the San Diego lab  
9 – still seeing high failure rates.

10 **NCWM 2026 Interim Meeting:** Jim Pettinato from Guidant: opposes the item with request to be withdrawn.  
11 Questions field testing is sufficient for the devices.

12 Ricardo Barillas from AWWA: requested withdrawal. NO data to investigate with details. See written comments.  
13 Michael Keilty from Endress Hauser supports what Ricardo said. Quite surprised that it was under  
14 consideration. Not sure immediately going into VCAP, it will solve the problem. It needs to be a group to  
15 investigate and provide data.

16 Jose Arrigo from Orange County CA: Data collection is ongoing, but some data is collected in different  
17 formats. Would like to have it stay on agenda to do a refined data collection county by county. Want to see if  
18 new vs used is an issue. There are certain meters that have high failure rates. Want to really dive into details to  
19 find issues.

20 Austin Shepherd from San Diego County CA: echoes Orange County. Hard to have multiple jurisdictions  
21 merging data. It's not an industry-wide problem. While checked by util companies, they don't all have the  
22 same processes. Submeters only be checked by W&M.

23 Michael Keilty from Endress Hauser: collection of information is collected from saints and sinners so brand  
24 identification is important. Matt Douglass from CA: supports OC and SD. Some concerns are not just for  
25 accuracy, but also other specifications.

26 **OTH – OTHER, A PLACE TO CAPTURE NON-TECHNICAL COMMENTS OR SUGGESTIONS**  
27 **INTENDED TO IMPROVE THE NATIONAL TYPE EVALUATION PROGRAM.**

28 Mr. Marc Paquette, Vermont | Committee Chair  
Mr. Jason Flint, New Jersey | Member  
Mr. Kevin Schnepf, California | Member  
Mr. Daniel Walker, Ohio | Member  
Mr. Paul Floyd, Louisiana | Member  
Mr. Jeff Gibson, NCWM | NTEP Administrator

**National Type Evaluation Program Committee**