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 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.*

Subject Series List

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)

INT – INTERNATIONAL

INT-1 I Mutual Recognition Arrangement (MRA)

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

The scope of the current MRA includes:

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

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

The current agreement expires on July 26, 2026.

INT-2 I OIML-Certification System (CS)

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

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

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

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

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

Information regarding the OIML-CS can be found at www.oiml.org. Katya Delak and Isabel Chavez Baucom represent the U.S. interests in this work and regularly provides updates to the NCWM Board of Directors on these activities.

ACT – ACTIVITY REPORTS

ACT-1 I NTEP Participating Laboratories and Evaluations Reports

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

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

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

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

ACT-2 I NTEP Sector Reports

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

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

Sector Chair	**NTEP Administrator**
Ms. Jessica Ferree	Mr. Jeff Gibson
Metter-Toledo, LLC	Ph: 740-507-6343
jessica.ferree@mt.com	jeff.gibson@ncwm.com

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

Sector Chair	**NTEP Administrator**
Mr. Jimmy Williams	Mr. Jeff Gibson
Missouri	Ph: 740-507-6343
jimmy.williams@mda.mo.gov	jeff.gibson@ncwm.com

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

Sector Chair	**NTEP Administrator**
Mr. Brent Price	Mr. Jeff Gibson
Gilbarco Inc	Ph: 740-507-6343
brent.price@gilbarco.com	jeff.gibson@ncwm.com

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

Sector Chair	NTEP Administrator
Mr. James Pettinato Guidant Measurement jim.pettinato@guidantmeasurement.com	Mr. Jeff Gibson Ph: 740-507-6343 jeff.gibson@ncwm.com

NTEP Multiple Dimension Measuring Devices (MDMD) Work Group:
The NTEP MDMD Work Group meeting was held on May 7th, 2025 refer to the Sectors web page for a copy of the meeting summary. The 2026 meeting is scheduled for May 6th. Refer to the Sectors web page for additional details. For questions on the status of work group or to propose items for a future meeting, please contact the sector Chair and/or the NTEP Administrator.

Workgroup Chair	NTEP Administrator
Mr. Chris Senneff Avery Weigh-Tronix csenneff@awtx-itw.com	Mr. Jeff Gibson Ph: 740-507-6343 jeff.gibson@ncwm.com

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

Workgroup Chair	NTEP Administrator
Mr. Andrei Moldoveanu NEMA And_Moldoveanu@nema.org	Mr. Jeff Gibson Ph: 740-507-6343 jeff.gibson@ncwm.com

CAP – CONFORMITY ASSESSMENT PROGRAM

CAP-1 I Conformity Assessment Program

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

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

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

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

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

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

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

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

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

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

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

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

ADM – NCWM PUBLICATION 14, ADMINISTRATIVE POLICY

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

Source:
Meter Manufacturers Association

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

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

> **7.2. Certification System (OIML-CS)**
> The International Organization of Legal Metrology Certification System (OIML-CS) is a voluntary system by which national issuing authorities or national responsible bodies within OIML Member States and Corresponding Members accept and utilize OIML Test Reports or OIML Type Evaluation Reports, for type approval or recognition in their relevant national or regional metrological control programs.
>
> The United States is a Member State in OIML and therefore is able to participate in the OIML-CS. The U.S. State Department has designated NIST, OWM to represent the U.S. in OIML. NIST, OWM has identified NCWM as the National Issuing Authority for the U.S. for OIML R76 (nonautomatic weighing instruments) and OIML R60 (metrological regulation for load cells) because NCWM administers NTEP. NCWM is also the National Issuing Authority for other weighing and measuring devices in the US. The NCWM is the active National Issuing Authority for R60 in a Declaration under the OIML-CS.
>
> By signing a Declaration, a National Issuing Authority declares confidence in the test results issued by Testing Laboratories that are designated by OIML Issuing Authorities under the OIML-CS. Participants in the OIML-CS are of two kinds:
>
> 1. OIML Issuing Authorities, which issue OIML Certificates and associated Type Evaluation Reports (they will provide evidence of competence, impartiality and quality).
>
> 2. Utilizers, which do not issue OIML Test Reports, but which accept OIML Test Reports or OIML Type Evaluation Reports as the basis of issuing corresponding National Type Evaluation Certificates.
>
> NCWM has entered into the OIML-CS for OIML R60 **and R117** as a Utilizer, thus allowing NCWM to accept test reports for the purpose of issuing NTEP Certificates of Conformance for load cells **and dynamic measuring systems for liquids other than water**. [Note: NCWM had previously participated in the Mutual Acceptance Arrangement (MAA) for OIML R60 load cells. The Certificate System replaced the MAA.] NTEP has specified in its Declaration that there is an additional national requirement in the U.S. for Class III L. All NTEP fees still apply, and additional evaluation may be required at the discretion of the NTEP Administrator.

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

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

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

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

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

Rebuttal:

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

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

Rebuttal:

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

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

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

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

requirements can still be applicable. John Hathaway, Murry Equipment: In general, supports the proposal. However, he is concerned that some products have been evaluated and approved in other countries that are not to the level of their peers. He recommends that NTEP scrutinize new products from overseas before they are entered into the US Market.

NCWM 2025 INTERIM MEETING: The committee heard support and opposition to this item during open hearing testimony. John Hathaway Total Control is concerned about the item; there are some positives and negatives, but the negatives outweigh the positives. NTEP procedures during testing if OIML is used. Dimitri Karimov liquid controls support passing. Dimitri Karimov Liquid Controls wants NTEP to review the data and decide whether to accept or decline. Liquid Controls views it as a bonus for NTEP. California wants to withdraw and needs to remain NTEP. Jim Pettinato Guidant supports the item, which will benefit NTEP. Michael Keilty Endress & Hauser Flowtec, AG, USA support items, makes items easier to test, and does not stop "hands-on" testing from NTEP.

NCWM 2025 ANNUAL MEETING: Dimitri Karamov - Liquid Controls In Support. John Hathaway - Murray Equipment - Against. Discourages NTEP & Board from adopting OIML. Expressed concerns that there are questionable products being approved by OIML. These substandard products could enter U.S. markets. Keep the robust U.S.- based testing and approval system with NTEP. Michael Kielty, Endress+Hauser, in Support Mass flow meters for Cryogenic liquids face difficulties finding labs capable of testing. MFM for high-capacity oil and high flows also face challenges. Recommend accepting OIML data by applying scrutiny and only recognizing specific labs that have been vetted for quality and accuracy. Supports this item although he would assume that NTEP would continue to test, however NTEP could utilize OIML labs for new products. NTEP could endorse labs that offer testing on devices that NTEP does not cover

National Propane Gas Association in Support. LPG is not a significant enough market to warrant cost of NTEP testing for current manufacturers of propane gas meters. OIML approval can fill the gap to support limited U.S. market.

Alison Wilkinson - Maryland Dept. Ag. Neutral. Stated that NCWM needs to protect NTEP stated that she sees both points being made. It is critical to ensure the integrity of the NTEP program and suggested further evaluations be done regarding the proposal.

NCWM 2026 INTERIM MEETING: Jim Petalano – Guidant Measurement. Encourages committee to allow OIML certificates to be considered as part of the NTEP process.

Alison Wlkinson – MD; Different regulators would accept different things. If OIML is accepted, then unify what is accepted and expected to be evaluated. Before deciding, committee should consider what data is going to be accepted.

John Hathaway – Murray Equipment: Strongly against this item. NTEP evaluators can travel to OIML sites to observe testing rather than just accepting data.

Michael Keilty – Endress + Hauser; Didn't think NTEP would ever allow certification based solely on OIML certificate but rather look at the data and expand the NTEP certificate. It would be beneficial to ask NTEP to evaluate data from OIML for larger unique devices.

Jim Pettinato – allow OIML certs

Allison Wilkinson, Maryland - Unify what would be accepted. BOD should have data on what would be accepted.

John Hathaway, Murry Equip strongly against this item. NTEP may travel to OIML sites to observe testing and not just accept certs.

Michael Kelty, Endress + Hauser Flow USA – Never thought NTEP would issue a cert based on OIML certs. Though NTEP would look at the data.

Jim Pettinato from Guidant: Encourage NTEP to be a utilizer.

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

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

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

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

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

ADM-24.2 W Implement Software Version Change Policy

Source:
NTEP Administrator

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

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

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

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

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

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

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

renumber all remaining sections.

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

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

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

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

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

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

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

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

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

NCWM 2025 Annual Meeting: Michael Keilty – Endress + Hauser – Supports the concept but NTEP might want to consider the program used in Canada. A simple change could be a letter which would be adequate to address this and should be offered at a reasonable cost.

Justin Wilson ChargePoint. Neutral. Concerns about implementation. Suggests a delayed implementation for manufacturers to prepare. Field devices have a wide variety of software environments. Need a process to make software modifications without a full CoC review again.

Alison Wilkinson Strongly support this item. Have found multiple flaws in software where metrological changes are occurring. New models are being introduced without review. Urge other states to review CoCs more closely has seen multiple problems. We should all be ensuring that devices are complying.

Matt Douglas. Supports comments from MD. Need to identify portion of software code (version number) that is allowed to increase without creating a sealable event or need to update certificate.

NCWM 2026 Interim Meeting: Jim Pettinato – Software sector chair: This is a reasonable thing to implement. Shouldn't be software updates that affect things. Need clarity on what the difference is going to be regarding firmware updates versus hardware updates.

Alison Wilkinson – MD; MD is vigilant with reviewing software to ensure no metrological changes have been made. With different units of measurements, what they found is that the first number has incremented. They experience pushback from manufacturers when discussing software updates. This is an issue in the field. The metrological parameter version number should be the first number, and any additional following number increases would not require reevaluation by NTEP. Companies are making changes without notifying NTEP. Move forward with this item. Supports.

John Hathaway – Murray Equipment: Understands the desire and supports this item. What will NTEP and inspectors be looking for? Wants to see some details in writing, such as which number can be changed with software versions.

Brent Price – Gilbarco: Curious about fees and when it would be implemented.

Matt Douglas – CA: Agrees w/ MD. Inspectors need to be able to verify that version numbers on devices are compliant with the existing NTEP certificate. Has seen many variations of version number formats. Makes it difficult for inspectors.

Michael Keilty – Endress + Hauser: Supports and wants the committee to look at Measurement Canada as a model.

Jim Pettinato, Software Sector Chair – was discussed at Sector. Understand issues. Need clarity on differences on evaluations.

Allison Wilkinson, Maryland – Some inspectors are more vigilant on inspecting software versions. Strongly urge to move forward.

John Hathaway, Murry Equipment - Understand the need. Supports. Looking for guidance on where NTEP will be looking for software versions.

Brent Price, Gilbarco – When would NTEP anticipate implement change.

Matt Douglas, California – Agrees with Maryland. Needs to be able to identify software version on NTEP type evaluation.

Michael Keilty, Endress + Hauser Flow USA – supports software tracking. Fully support item

Jim Pettinato Software Sector Chair: Consensus that this is a reasonable thing to do. Needs clarity on what the difference is between firmware eval and whole device eval.

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

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

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

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

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

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

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

Source:
NTEP Administrator

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

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

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

21.1.3. NTEP Verified Conformity Assessment Program Procedures

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

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

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

…

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

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

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

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

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

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

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

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

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

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

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

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

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

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

NCWM 2026 Interim Meeting: Jim Pettinato from Guidant: opposes the item with request to be withdrawn. Questions field testing is sufficient for the devices.
Ricardo Barillas from AWWA: requested withdrawal. NO data to investigate with details. See written comments.
Michael Keilty from Endress Hauser supports what Ricardo said. Quite surprised that it was under consideration. Not sure immediately going into VCAP, it will solve the problem. It needs to be a group to investigate and provide data.
Jose Arrigo from Orange County CA: Data collection is ongoing, but some data is collected in different formats. Would like to have it stay on agenda to do a refined data collection county by county. Want to see if new vs used is an issue. There are certain meters that have high failure rates. Want to really dive into details to find issues.
Austin Shepherd from San Diego County CA: echoes Orange County. Hard to have multiple jurisdictions merging data. It's not an industry-wide problem. While checked by util companies, they don't all have the same processes. Submeters only be checked by W&M.
Michael Keilty from Endress Hauser: collection of information is collected from saints and sinners so brand identification is important. Matt Douglass from CA: supports OC and SD. Some concerns are not just for accuracy, but also other specifications.

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

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

National Type Evaluation Program Committee