



**State Directors' Breakfast**  
**Questions and Responses**  
**Regarding**  
**NTEP Issues**

*For the past several years, the Scale Manufacturers Association and the National Conference on Weights and Measures have hosted breakfast meetings at the regional Weights and Measures association venues throughout the year.*

*In order to ascertain the degree of uniformity and interpretation of selected W&M practices, the same questions are asked at each regional meeting.*

*The responses are non-attributable to preserve an atmosphere for candid answers.*

*This document is a composite of the responses and is provided as a service by the Scale Manufacturers Association in support of the continuing education effort required to insure the success of the National Type Evaluation Program.*

*For a downloadable copy visit the SMA Web Site at  
<http://www.scalemanufacturers.org>.*

### **1997 QUESTIONS**

QUESTION ONE: How does your jurisdiction conduct initial verification shift tests on vehicle scales? Do your tests conform to N.1.3.4 (two or more loads) and EPO-13?

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QUESTION TWO: Does your jurisdiction require NTEP software Certificates? If not, do you conduct your own evaluation? How do you determine if software is “suitable” for its application ?

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QUESTION THREE: Once you have decided that an installation is “one of a kind” (NTEP Model Regulation definition, Handbook 130), what initial verification tests do you require to put the device into service? Do you require the device to meet the durability criteria of an approved device?

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### **1998 QUESTIONS**

QUESTION ONE: How does your jurisdiction insure that production meets type?

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QUESTION TWO: What method is used in your jurisdiction to verify that service personnel are qualified to repair and return a scale to service

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## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

### **QUESTION ONE - 1997: How does your jurisdiction conduct initial verification shift tests on vehicle scales? Do your tests conform to N.1.3.4 (2 or more loads) and EPO-13E?**

#### **Central Weights and Measures Association** **Responses**

C1. No, their tests do not comply. The test consists of running the test truck across the scale stopping every 4 feet and recording the weight. The truck is then removed from the scale, zero checked, and then driven back across the scale platform again taking readings every 4 feet. The test weights are then placed on either the lightest or heaviest section identified in the first part of the test. Next, the weights are moved to the other extreme (either the lightest or heaviest reading depending on which was checked first), State has five vehicle test trucks each with 21,000 pounds of test weights. As of May 1997 they did not have any test carts.

C-2 Yes, they feel than' tests conform to H44. They have purchased two new test trucks within the last year but only one is equipped with a test cart. The second truck will get a cart when funding becomes available. They test with two different weights in a manner similar to that used by an adjoining state.

C-3 Yes, they feel their tests conform. They have six test trucks and test at the "load-bearing points".

C-4 No, their method does not comply exactly. State tests over each section and at mid-span moving the load in both directions across the scale platform.

C-5 Don't know for sure but is fairly certain that they comply with H44. State, as of May 1997, has six vehicle scale test trucks.

C-6 Yes, they feel that they comply with the requirements. They have one test truck with a test cart and they test sections and mid-span using 10,000 and 20,000 pounds of test weights. They can go up to a maximum of 22,500 pounds with their cart. They state that they find a number of errors on mid-span and have referred the problems to the scale service companies.

C-7 Yes, they also comply with the vehicle test requirements. State has six vehicle scale test trucks each equipped with a test cart. They test both at sections and mid-span using two loads. They indicated that they have a relatively high rejection rate on vehicle scales in the state.

C-8 State field inspectors have recently completed training in vehicle scale testing and feel that they now comply with the requirements. Currently they have three test trucks and are buying two more.

C-9 Yes, they feel that they comply with the vehicle scale test requirements. They have six vehicle scale test trucks, three of which are equipped with test carts.

C-10 Yes, they comply with vehicle scale test requirements. State has three vehicle scale test trucks each with 30,500 pounds of test weights including a 4,500- pound test cart. They test at 16,500 and 30,500 pounds at each section and at mid-span.

C-11 Field inspectors have recently completed training in the testing of vehicle scales and they feel they now comply with H44. State has three vehicle scale test trucks each with 20,000 pounds of test weights but no test carts. They can apply up to a 60,000 pound strain load.

#### **Northeast Weights and Measures Association** **Responses**

N-1 State tests all sections with test loads of 17,000 and 25,000 pounds and conducts a strain load test at one end of the scale. They have a total of 25,000 pounds of test weight.

N-2 State has two 18-wheel test trucks each equipped with a number of 3,000-pound test weights and a forklift to move them. They feel that they comply with the requirements for vehicle scale testing and routinely conduct strain load tests to 100,000 pounds.

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N-3 Yes, they feel that their test weights are in compliance with EPO-13. They use a single test cart with 21,000 pounds of test weight.

N-4 State does not have a vehicle scale test truck. Rather, they check the test results from private service companies and ask for additional testing as required. Because of budget restrictions, they have no hope of this situation changing. They have a total of six people in their department. They do not comply.

N-5 State uses a crane to move their 34,000 pounds of test weight. They feel that their test methods comply.

N-6 State tests about 150 vehicle scales each year using a test cart and 20,000 pounds of test weight. They conduct their tests at loads of 18,000 and 28,000 pounds and perform strain load tests from 80,000 to 110,000 pounds. They have only one test truck and therefore depend on the private service companies for assistance. They require the service companies to carry from 18,000 to 20,000 pounds of test weights and to test all sections. It was stated that many of the service companies are purchasing test carts to improve their testing efficiency,

N-7 The state metrologist was in attendance and did not know how his state tests vehicle scales.

N-8 State has 20,000 pounds of test weights and tests all sections followed by a build up test.

### Western Weights and Measures Association Responses

W-1 Yes, they comply with H-44 requirements and EPO-13E. They use a double shift test conducted with weights placed in a motorized cart.

W-2 Yes, they feel that they comply. State uses 21,000 pounds of test weights placed in a motorized cart.

W-3 Vehicle scale tests vary from county to county so it is impossible to give a single answer for the state.

W-4 Yes, they comply with H44 and EPO-13E re-

quirements They use from 21,000 to 25,000 pounds of test weights.

W-5 In general, they comply but conduct only one shift test using 20,000 pounds of test weights.

W-6 Yes, they comply.

W-7 Yes, they comply. They have two motorized test carts each with 25,000 pounds of test weights.

W-8 Yes, they comply and use 20,500 pounds of test weights.

W-9 Yes, they too comply and use 20,000 pounds of test weights. They do not have any motorized test carts.

W-10 Yes, they comply with H-44 and EPO-13E. They use a total of 25,000 pounds of test weights.

W-11 Yes, they comply and use 20,000 pounds of test weights.

### Southern Weights and Measures Association Responses

S-1 Yes, they comply as closely as possible but are operating with limited personnel and equipment.

S-2 They do not use EPO-13E and rarely conduct initial verification tests.

S-3 Yes, State conducts initial verification tests conforming to EPO-13E and N.1.3.4.

S-4 Yes, the State follows N.1.3.4 and EPO-13E and uses a calibrated weight cart in their evaluation of vehicle scales.

S-5 Yes, State follows N.1.3.4 and EPO-13E when evaluating vehicle scales.

S-6 State does not have weight carts for vehicle scale testing. They do have test weights and typically work with the scale Service Company in evaluating vehicle scales.

S-7 State does not conform to EPO-13E and

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N.1.3.4. Rather, the state uses their own examination procedure outlines for vehicle scale testing,

S-8 State has five new test trucks each with 33,000 pounds of calibrated test weights and test carts. They state that their tests conform to EPO-13E and N.1.3.4.

S-9 Yes, State follows N.1.3.4 and EPO-13E. They also conduct tests beyond these procedures when evaluating vehicle scales.

S-10 Yes, the State follows the procedures in N.1.3.4 when conducting shift tests but does not conform entirely with EPO-13E.

S-11 State conforms to both N.1.3.4 and EPO-13 in their evaluation of vehicle scales.

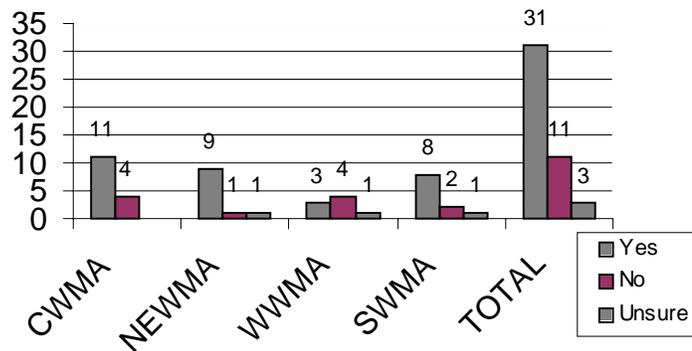
S-12 State does not have a weight cart and normally works with the scale Service Company in evaluating vehicle scales.

S-12 Yes, State follows the procedures outlined both in N.1.3.4 and EPO-13E in their vehicle scale evaluations.

S-13 State has test carts in three of their four test trucks and, when using one of these trucks, comply with N.1.3.4 and EPO-13. A new test truck has been ordered to replace the fourth truck and, when the new truck is received, will be in complete compliance with N.1.3.4 and EPO-13.

S-14 State conforms to both N.1.3 and EPO-13E in their vehicle scale

**1997 Question 1: Compliance with N.1.3.4 and EPO-13E in Vehicle Scale Examinations**



69% Percent of those jurisdictions responding state that their vehicle scale tests are in compliance with N.1.3.4 and EPO-13E

	Yes	No	Unsure
CWMA	11	4	
NEWMA	9	1	1
WWMA	3	4	1
SWMA	8	2	1
TOTAL	31	11	3

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

### **QUESTION TWO - 1997: Does your jurisdiction require NTEP software Certificates? If not, do you conduct your own evaluation? How do you determine if software is "suitable" for its application?**

#### **Central Weights and Measures Association** **Responses**

C1. No, they do not require a CC for software but do require a CC for the hardware and software up to the first primary weight indication. They don't check the security features of the software, only how it operates. The greatest problem they have found is with indicators connected to computers running application software. They find many PC software programs do not detect a change in the indicated weight from pounds to kilograms.

C2. Yes, they require NTEP CCs for software packages separate from the indicating element. They only perform routine field inspections of software, primarily the application portion.

C3. Yes, they require an NTEP CC for software if it is separate part of the indicating element. Their primary concern is with the ability of some software packages to be modified in the field via a modem. They also have problems with software packages that allow manual entry of weight and require direct transmission of weight data from the indicating element.

C4. Yes, a software CC is required if the software is a separate part of the indicating element but not if it is an application program running in a PC. They too have had problems with the manual entry of weight and require direct transmission of weight into a computing device. Currently, they attempt to evaluate the whole system in the field.

C5. Yes, they require NTEP CCs for software as part of the indicating element but depend greatly on the scale service technician for assistance. No, they do not require a CC for software. They attempt to look at the system as a whole.

C6. No, they do not currently require an NTEP

CC for Software. They do, however, attempt to evaluate the software by themselves as part of the field examination of the system.

C7. Yes, they do require software CCs if the software is a separate part of the indicating element. They currently are unable to properly evaluate the software by themselves.

C8. No, they do not require separate software CCs. They have no specific software requirements but attempt to look at the system as a whole.

C9. Yes, they require software CCs if that software is a separate part of the indicating element. They check up to the first primary weight indication but no further. They would like a simplified software examination checklist.

C10. Yes, they require a software CC if the software is separate from the indicating element. Like most other states in the CWMA, this state is having a difficult time dealing with software evaluation.

#### **Northeast Weights and Measures Association** **Responses:**

N1. Yes, software CCs are required on all devices but they do not currently check for separate software Certificates Of Conformance. If a Separate CC for the software is not available, the field inspector makes a basic check of the system operation.

N2. Yes, software CCs are required, If a separate CC for the software is not available, the field inspector makes a field evaluation of the operation of the whole system.

N3. If a separate NTEP CC does not exist, the State's field inspector will perform a basic examina-

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tion of the operation of the whole system. They feel that they have no clear direction on how to test software and need additional training,

N4. In this State, the weights and measures inspector is not present during installation and initial testing of the system. They do not require software CCs and would not hilly find a problem in the metrological portion of the software if one did exist.

N5. This State stops their inspection at the scale and does not perform any test of application software. Of course, all devices installed in the State must have a State certificate of conformance.

N6. No, software CCs are not required at the present time. There is doubt that they have the expertise to evaluate software anyway. They feel that the only way to really test a special software application is to test it with pre-weighed loads in a sort of covert investigation without the device owner's knowledge.

N7. The representative from this State had no knowledge of its state's requirements regarding software conformance.

N8. No special measures are taken to check software and separate software CCs are not require

### Western Weights and Measures Association Responses:

W1. No, separate CC& for software are rat required. No separate evaluation of software is made but an overall evaluation of the device or system is conducted.

W2. Yes, software CCs are required but they have no means of testing and validating the proper separation of the software.

W3. Yes, software certificates of conformance are required.

W4. No, software CCs are not required but a careful review of the application is made with the device owner to ensure proper compliance.

W5. No, software certificates of conformance are not required - The whole device or system, including the software, is evaluated to ensure compliance.

W6. No, software certificates of conformance are not required. The system or device is viewed as a whole.

W7. No, software certificates of conformance are not required.

W8. Yes, software certificates of conformance are required. The whole device or system must demonstrate that it is suitable for the application.

W9. No, separate software certificates of conformance are not required but an evaluation is made to verify that the software does not affect the weight value.

W10. No, software certificates of conformance are not required. The field inspector is responsible for the verification of the, correct operation and appropriateness of the software.

W11. No, software certificates, of conformance are not required. Like W10, the field inspector is assigned the responsibility for verifying that the operation of the software does not adversely affect the weight value.

### Southern Weights and Measures Association Responses:

S1. This State does not require Certificates of Conformance for software and does not conduct evaluations of software.

S2. This State does not require NITEP Certificates of Conformance for software and does not conduct separate evaluations of software.

S3. No, this State does not require NTEP Certificates of Conformance for software. The State checks for abnormal operation during the evaluation of the device or system and takes appropriate action.

S4. This State does not require NTTEP Certificates of Conformance for software.

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S5. No, this State does not require NTEP Certificates of Conformance for software.

S6. No, this State does not require NTEP Certificates of Conformance for software.

S7. This State does not require NTEP Certificates of Conformance for software. They do, however, perform separate evaluations of a device to ensure that software does not adversely affect the metrological characteristics of the device or system.

S8. Software NTEP Certificates of Conformance are not currently required. The operation of the software is checked during the initial evaluation of the device to ensure it does not adversely affect the system performance.

S9. This State does not require NTEP Certificates of Conformance for software.

S10. NTEP Certificates of Conformance for

software are not required in this State.

S11. This State does not require NTEP Certificates of Conformance for software.

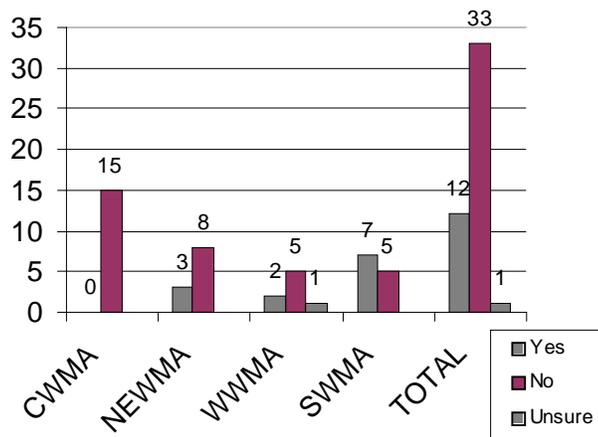
S12. NTEP Certificates of Conformance for software are not required in this State.

S13. This State does not require NTEP Certificates of Conformance on software and has no separate evaluations of software planned. Texas relies on routine inspections to uncover software that does not function properly.

S14. This State does not require NTEP Certificates of Conformance for software.

S15. This State does not require NTEP Certificates of Conformance for software. Evaluation of software takes place during routine field examinations but no special procedures are used for the evaluation

**1997 Question 2: Requirement for Software NTEP Certificate of Conformance**



71 Percent of respondents did not require NTEP CoCs for Software.

	Yes	No	Unsure
CWMA	0	15	
NEWMA	3	8	
WWMA	2	5	1
SWMA	7	5	
TOTAL	12	33	1

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

**QUESTION THREE - 1997: Once you have decided that an installation is "one of a kind" (NTEP Model Regulation definition, Handbook 130), what initial verification tests do you require to put the device into service? Do you require the device to meet the durability criteria of an approved device?**

### Central Weights and Measures Association Responses

There was insufficient time to receive responses from the members to this question.

### Northeast Weights and Measures Association Responses:

There was insufficient time to receive responses from the members to this question.

### Western Weights and Measures Association Responses:

W-1 We require that the load cell(s) and indicator used in a one of a kind device have NTEP certificates of conformance. Normal evaluation methods are used to verify proper operation or one of a kind devices.

W-2 Allows one of a kind devices and uses existing EPOs for inspection.

W-3 This state coordinates with local jurisdictions in the evaluation of one of a kind devices. NTEP CCs are required for the load cell(s) and indicator used in these devices.

W-4 Allows one of a kind devices and uses standardized checklists for their evaluation. The load cell(s) and indicator used must have NTEP CCs.

W-5 One of a kind devices are allowed. The evaluation of one of a kind devices follows the same guidelines as the NTEP evaluation.

W-6 One of a kind devices are allowed but they do not conduct durability or permanence tests.

W-7 One of a kind devices are allowed. The same initial verification tests as those for approved devices are used. There is no separate durability or permanence test but this characteristic is checked by subsequent testing.

W-8 State allows one of a kind devices but requires a letter certifying that they are indeed one of a kind. Acceptance is withheld until the minimum number of weighments has been satisfied for the permanence test.

W-9 Allows one of a kind devices and uses standard EPOs for inspection.

W-10 One of a kind devices are allowed but they must comply with NTEP performance requirements.

W-11 One of a kind devices are allowed but the device must meet the NTEP performance requirements. Durability or permanence conformance is determined by results of successive tests.

### Southern Weights and Measures Association Responses:

S-1 Allows one of a kind devices and performs as close to a NTEP evaluation as possible in their evaluation.

S-2 Allows one of a kind devices and relies on subsequent verification to ensure the durability requirements are met.

S-3 Allows one of a kind devices and uses the checklist from Publication 14 for the most similar device type. Permanence testing is used to verify durability of the device.

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S-4 Allows one of a kind devices and uses initial and subsequent testing to determine acceptance of the device. The acceptance can be withdrawn if identical devices are found later.

S-5 State has no policy regarding one of a kind devices because they have not had to address the issue thus far.

S-6 Allows one of a kind devices and currently has several requests for acceptance of one of a kind devices. They anticipate more one of a kind request in the future. Temporary approval is given until enough test data has been gathered over time to indicate permanence.

S-7 Allows only a single one of a kind device. Issues a Certificate of Conformance following the same NTEP criteria. State encourages the applicant to seek NTEP evaluation because their acceptance criteria is the same.

S-8 State allows one of a kind devices. Device permanence is determined by subsequent testing.

S-9 Jurisdiction is encountering more electronic PC-based one of a kind systems that consist of a weight indicator and PC with special application software.

S-10 State allows one of a kind devices provided that they use components (load cells, indicators) with NTEP Certificates of Conformance. Subsequent testing is used to determine compliance of the device with the permanence requirement.

S-11 One of a kind devices are tested in the same manner used for any other type of device. Subsequent testing may or may not be required depending on the nature of the device.

S-12 State handles one of a kind devices on a one by one case basis.

S-13 State allows one of a kind devices and inspects them using the same procedures as those used to test standard devices.

S-14 The one of a kind devices have primarily come from scale service companies. State requires that the buyer and seller who will use the device enter into a formal agreement that, if a second device is found later, a NTEP Certificate of Conformance will be obtained. Jurisdiction, like other states, is encountering increased numbers of PC-based one of a kind systems.

S-15 State allows one of a kind devices and uses normal testing methods in their evaluation. Subsequent testing is used to verify the permanence

	CWMA	NEWMA	WWMA	SWMA	Totals
Check Component CoCs	1	3	3	1	8
Existing EPOs	5	4	4	5	18
Pub 14 Checklist	3	4	4	3	14
Durability / Permanence	4	2	2	4	12

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

### **QUESTION ONE - 1998: How does your jurisdiction ensure that production meets type?**

#### **Northeast Weights and Measures Association Responses**

N1 We cannot ensure that production meets type. We verify performance through field testing. Service companies also “snitch” on each other and that information is used to check the validity of the device.

N2 We require NTEP Certificates of Conformance for all devices installed within the state and check and verify that the device installed is the same as listed on the certificate.

N3 We use our own evaluation process which is based on Handbook 44. We require the submission of an NTEP Certificate of Conformance for the device before beginning our own evaluation.

N4 We don't ensure that production devices meet type. Since 1930 we have listened carefully to field inspectors' opinions. Field inspectors thoroughly review the device in the field to verify that it is the same as listed on the NTEP Certificate of Conformance. We feel that data on the initial evaluation is very important and are currently working on a data base to hold this data which is collected from separate jurisdictions within the State.

N5 We look for devices that do not have NTEP Certificates of Conformance.

N6 We don't ensure that production meets type. We do, however, work closely with service people who often provide feedback about potential device problems.

#### **Western Weights and Measures Association Responses**

W1 We distribute a copy of the certificate of conformance to all jurisdictions. Our examination procedures require conformation of the certificate of conformance. Our field inspectors are encouraged to ask questions about approval. County officials call the state office if they experience problems with a device type then NIST is contacted to see if there is a trend. Their

first step is to verify existence of a certificate of conformance then to check for any alterations made to the device. They felt more could be done and that a means of tracking data is required to adequately assess compliance of production devices. One person noted that older certificates of conformance often do not contain enough information to determine whether a new device is in compliance.

W2 The State uses NTEP pre-inspection forms that scale service companies complete before the field inspector looks at the device. This form includes the certificate of conformance number plus other pertinent data. The device is not accepted for commercial use until the form has been completed. There have been some problems with out-of-state dealers using the form but in-state dealers have complied. There is concern about the use of one-of-a-kind devices within the state. Currently a memorandum of understanding between the state and the device buyer and seller is used to confirm that the device truly is one of a kind. There is concern that this information does not get back to NIST allowing identical devices to be installed in other jurisdictions.

W3 The field inspector calls the state office when he encounters a new device. The inspector also advises the state office if any unusual problems are encountered during the evaluation of the device and the state office in turn contacts the device manufacturer. Non-obvious changes (like material thickness) are difficult to detect and may result in a departure from the device described on the NTEP Certificate of Conformance.

W4 The State required an NTEP Certificate of Conformance on all new devices beginning January 1<sup>st</sup> of 1999. The state has just now adopted NTEP and their program is still under development.

W5 The State has been an NTEP state since 1996 and checks for an NTEP Certificate of Conformance on every new device. Inspectors call the state office if they have any questions or encounter problems during the examination. Sometimes problems result when an

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out of state company installs the device. In these instances, the state gives conditional approval pending receipt of the proper documentation.

W6 The State faces the same problems as neighboring states. All we can do is to verify the device has an NTEP Certificate of Conformance then conduct enough tests to verify its proper performance.

W7 Our State is not sure if anyone is capable of ensuring that production devices meet type. A national data base is required to track problem device types.

W8 The State is relatively new to the NTEP program and is still in a stage of transition in the training to their field inspectors. State field inspectors contact the state office for NTEP Certificates of Conformance and to ask questions about the device. The state office then forwards the question to NIST or the device manufacturer if the problem cannot be resolved locally. The State has many one-of-a-kind devices, particularly in the fishing industry. These devices have been normally grandfathered but require the use of components (load cells and indicators) with NTEP Certificates. It would be helpful if device manufacturers included a copy of the NTEP Certificate of Conformance with the device.

W9 The field inspectors adhere to the Examination Procedure Outlines (EPOs) provided by NIST.

### Southern Weights and Measures Association Responses

S1 We closely follow NIST rules using certified standards.

S2 Field inspectors check the device model number against information contained on the NTEP Certificate of Conformance to verify the device is covered.

S3 The State field inspectors follow EPOs in inspection and testing of devices. If inspectors have questions, the state office is contacted. It is, however, impossible to verify the device immunity to influence factors in the field.

S4 Scale companies are relied upon to ensure that appropriate equipment is used. Field inspectors perform follow up checks of the device but it is not possible to verify all aspects because of a lack of man-

power and equipment.

S5 The State uses Examination Procedure Outlines in field evaluation of devices. The field inspector also verifies that the device is listed on an NTEP Certificate of Conformance.

S6 Our field inspectors verify that the device is listed on an NTEP Certificate of Conformance. If the field inspector has questions or encounters problems, the state office is contacted which in turn contacts NIST if the problem cannot be resolved locally.

S7 The State follows their own detailed examination procedure outline to ensure device accuracy is acceptable. Field inspectors carry copies of Publication 5 allowing them to verify the existence of the NTEP Certificate of Conformance. The State also has its own NTEP lab which assists with field questions. We are, however, unable to test for compliance with influence factors in the field. Including a copy of the NTEP Certificate of Conformance with the device would be helpful.

S8 We require an NTEP Certificate of Conformance for all new devices and are currently investigating acquisition of laptops for all of our field inspectors.

S9 The State would like to see a copy of the applicable NTEP Certificate of Conformance included with each device. We have no particular method of dealing with production meets type and approach it like the other states.

S10 Our program is still being developed. We use similar techniques as described by others to address production meets type.

S11 The State field inspectors use examination procedure outlines in field evaluations of new devices. They also verify existence of an applicable NTEP Certificate of Conformance by using Publication 5.

S12 We are unable to verify in the field that a device meets the influence factor requirements. We concentrate our testing efforts on new device types and verify that an NTEP Certificate of Conformance exists for the device.

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S13 Our State uses examination procedure outlines in our normal inspection process. We also find it impossible to verify that production meets type.

### Central Weights and Measures Association Responses

C1 We can't ensure that production devices meet type. All of our inspectors carry copies of the NTEP Certificates of Conformance and conduct field tests. Often we're unable to identify problems with a specific device model not meeting type because of the limited number of devices of that model installed within the state.

C2 The State will become an NTEP state the first of August of this year. State inspectors check the device after it has been placed in service.

C3 We don't ensure that production meets type but we do require a copy of the NTEP Certificate of Conformance for all new device installations.

C4 We cannot verify that the device in the field is identical to that submitted for evaluation at the NTEP lab. We do, however, verify that the device has a NTEP Certificate of Conformance. We also educate service companies on the proper procedures to be used in evaluating a device and exactly what a specific Certificate of Conformance covers.

C5 We have 13 weights and measures field inspectors and require NTEP Certificates of Conformance for all devices installed since 1988. A revision of the State's weighing act is pending. We also review all inspectors' reports and have access to pass/fail rates but not by device type.

C6 We don't ensure that production meets type other than a review of placed in service reports and to require that all new devices have an applicable NTEP Certificate of Conformance. Placed in service reports are reviewed and if a failure pattern is observed for a

particular device type, the device manufacturer is contacted. (This has happened twice.)

C7 We require an NTEP Certificate of Conformance and a placed in service report for all devices installed within the state. We also provide statewide training and have seen our 20 percent rejection rate fall to 7 percent for large scales and 3 percent for small scales.

C8 We don't have a formal program to ensure production meets type but we do initial and on-going inspections. Since 1992 we have been working on a data base to hold the results of these inspections. The data base is used to identify trends either in a device model or in a service technician's work and is designed such that specific model numbers can be tracked.

C9 There's no simple answer to this question. We provide training which concentrates on initial verification of the device. Inspectors can identify problems while feedback is provided by industry and scale service companies about devices that are not compliant. We attempt to work with the device manufacturer to arrive at a solution. The State NTEP lab sometimes performs an initial verification and has, in the past, received other devices of the same model that are different.

C10 As a state with a small population, we are forced to rely on inspectors to identify problems with devices not meeting type. Inspectors are called upon to check a wide variety of devices and commodities and therefore have limited time to perform this function. The state does require an NTEP Certificate of Conformance and a placed in service report for all new devices.

C11 Inspectors have NTEP Certificates of Conformance for devices placed in service. The state relies on these inspectors to report noncompliance in devices. The information is maintained in a data base. We have referred several instances of noncompliance to NTEP.

	NEWMA	WWMA	SWMA	CWMA	Totals
Can't/Don't Test for Influence Factors	1	1	4		6
Check for CoC Conformance	3	5	6	8	22
Have Own Procedurew (EPO)	1		4		5
Service Agency Feedback	2		1	2	5
Field Inspector Feedback	1	4	2	5	12
Track via Data Base			2	0	2

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

### **QUESTION TWO - 1998: What method is used in your jurisdiction to verify that service personnel are qualified to repair and return a scale to service?**

#### **Northeast Weights and Measures Association Responses**

**N1** The State requires registration of service technicians and ask that they provide a description of their qualifications. This information is sometimes verified. Normally the scale service company sends a letter describing the service technician's qualifications. Service technicians are required to have the necessary test weights (as described in Handbook 44) and equipment needed for their work.

**N2** We require that the scale service company has the necessary certified test weights and check their work on a random basis. If needed, action can be taken based on field problems with their work.

**N3** Written tests are required for all scale technicians.

**N4** We don't register scale service personnel but do maintain a data base on scale service companies. The testing guidelines provided to state inspectors are also provided to the scale service companies. Scale service company personnel are invited to the state's training schools. Scale service company personnel also report to the state any incorrect or substandard work they observe in the field.

**N5** Beginning January first of 1998, all scale service personnel are required to be registered with the state. This program is in its infancy and will be developed further.

**N6** We have a registered service technician program but, unlike some other states, do not require them to buy their own test weights. We do require placed in service reports and conduct follow up inspections. A move is underway to require the scale service companies to have their own test trucks rather than getting them from adjacent states. The state is small enough that we know the current status of most of our scales.

#### **Western Weights and Measures Association Responses**

**W1** A placed in service report and an as-is status report for scales over 5,000 pounds in capacity are completed for each device returned to service. Copies of the report are sent to field inspectors who perform initial tests. If problems are found, civil penalties may result as well as the loss of license. We have few problems with in-state service companies. Most of the problem comes from companies outside the state. Device owners may repair their own device but cannot place it in or return it to service.

**W2** We have no formal program of testing scale technicians. We require that they notify their local jurisdiction within 24 hours of placing a scale in service. If problems are found in the subsequent evaluation, their license to place devices in service can be pulled. Standards used in service must be calibrated and certified. Performance of the scale companies is tracked. Penalties for substandard work include civil fines and loss of license. Licensing is mandatory. The scale technician applies a seal identifying the technician to each device serviced. The State would like to conduct training sessions for all scale technicians working within the state.

**W3** The State has no mandatory licensing requirement. We do, however, ask for support from the NCWM and industry in the adoption of a new rule requiring licensing. At the present, only re-testing of devices placed in service by the scale technician is used to detect substandard work but it is not possible to do this on all devices. If a problem is encountered, a letter is sent to the service company with a threat of pulling their license.

**W4** The State has always had some type of service registration. We now require an open-book test to ensure that the service technician has and is familiar with the proper documentation. People can fix scales but cannot return them to service without being registered by the state.

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

**W5** The State requires the registration of scale service technicians. They also use follow up testing on a random basis to identify those technicians whose performance is not acceptable. Once found, such technicians may be subject to an administrative hearing and could have their license revoked for substandard work.

**W6** Registration of State service technicians includes the listing of their standards. Field inspectors re-test to validate the service technician's work. There are no penalties for poor work leaving it to the device owner to seek another source for scale service work when the present technician is not performing adequately.

**W7** Registration of State service technicians is voluntary. The state, however, requires that only a registered technician place the device in service. Further, registration requires that the technician have a minimum of certified standards and calibration records. The State provides instructions for registration and placement in service. If problems are encountered with a service technician, they are contacted and advised of the deficiency. Three or more instances can result in revocation of the technician's license.

**W8** Annual meetings are held in the State to instruct service technicians in current requirements. The State requires a placed in service report within 96 hours of the installation of a new device or return to service of an existing device. There is no formal testing of service technicians and the device owner is allowed to repair the device but must have a registered service technician place it in service.

**W9** The State has mandatory registration of service technicians and requires that they pass a test on State regulations. They are currently revising their test content to require that the technician be familiar with NIST Handbook 44. They are also implementing a data base that will be used to track scale company performance. Administrative procedures are in place to revoke a technician's license for just cause.

**W10** The State is currently working on a program for registration of scale service technicians and expects to have it in place this year.

### Southern Weights and Measures Association Responses

**S1** Ten dollars and a signature are all that are required for registration as a scale service technician. The State is currently working on the development of a test. Follow up tests are conducted to check on the technician's work. Registered technicians must have the required standards. The state can pull the technician's license for just cause. This has happened once since 1982.

**S2** The State has a registration program but does not administer a test. Registration requires that the technician have adequate certified standards.

**S3** The State has more than 180 registered scale companies with over 1,000 scale technicians and therefore cannot register all technicians. Registration is given only after initial work has been reviewed and found to be satisfactory by a field inspector. Files are maintained on each scale company and are reviewed every two years. Registration of meter technicians is mandatory. Registrants must attend a state conducted clinic, pass a test and have their standards verified.

**S4** The State registration program includes an open-book test over NIST Handbook 44 and State statutes. The registered scale technician must have certified standards adequate for their work and are subject to follow up testing by state field inspectors.

**S5** At the present, all that is required for registration in the State is ten dollars and a signature. The State is considering implementation of a written test program in the future.

**S6** Registration for a scale company costs fifty dollars while a scale technician pays twenty-five dollars. The registered technician must have a copy of NIST Handbook 44 and a copy of State statutes. The State plans on initiating a testing program next year and is in the process of acquiring laptop computers for their field inspectors.

**S7** The State does not have a registration program. Their actions are based on what the field inspectors find. If problems are found with a technician's work, the technician is called and the problems reviewed. The State is an active participant in the ISWM proposed

## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

program for certification of scale technicians. State technicians are required to have adequate calibrated standards.

**S8** In the past, the State licensed only the scale company but is now licensing scale technicians as well. No formal testing takes place. However, the State uses follow up testing to check on the scale technicians' performance.

**S9** The State has a mandatory registration requirement. Follow up testing is used to verify the quality of the technician's work. Civil penalties can be levied for substandard work.

**S10** If a scale company has more than two scale technicians, it must be registered with the State. Consideration is being given to implementing a formal testing program for technicians.

**S11** The State does not test technicians but does require that the scale company be licensed and the technicians registered. Four hours of required instruction and calibrated standards appropriate for the application are also required. After three years, a video tape summarizing changes in Handbook 44 is sent to the 1,500 registered scale technicians.

**S12** The State has a voluntary program but requires that only a registered technician place a device in service. There is no formal training program at present although plans call for offering training in 1999. The scale technician must have a calibration seal approved by the state. Civil penalties include revocation of the technician's license.

### Central Weights and Measures Association Responses

**C1** Scale service personnel are required to go through a training program and take a written test on state regulations. If a problem develops, the individual is called in for a counseling session then, if required, the license may be suspended. Training videos are prepared and shared with scale service companies.

**C2** We have no registered scale service technician law.

**C3** We require registration of all scale service

personnel but do not administer a test. They must know the content of both the State statutes and NIST Handbook 44. A data base is maintained of service people and their associated pass/fail rate. If warranted, registration may be suspended. (The data base was started several years ago.)

**C4** We require four hours of education each year to maintain registration. Training can come from the state or from a manufacturer. The registered scale technician must also pass a written test each year. The state reviews service reports and randomly selects devices for follow up testing by State inspectors to verify that the work has been properly completed. Of 208 devices inspected, 18 were rejected and, of those 18, 15 had come from the same scale service company. Because of this, it is anticipated that action will be initiated against the company. We maintain a data base on pass/fail rates and normally look at it by device type although we can, if desired, check it by device type and/or manufacturer.

**C5** Proposed legislation includes a registered scale service technician program. We want to register scale service technicians and have them pass a written test. Consideration is being given to developing a reciprocity program with adjacent states for registration of scale service personnel.

**C6** We require an interview and a written test for scale service personnel before they can be registered. They are also required to have certified test weights sufficient for their work.

**C7** Training is most important to ensure that service personnel look at the proper components of a metrological system. Service companies are registered and their personnel are required to have a knowledge of State statutes and NIST Handbook 44. The state places a priority on checking devices within 30 days of being returned to service by a registered scale technician. We also work with adjacent jurisdictions in managing scale companies.

**C8** The State has 500 registered scale service technicians who must pass a written test every two years. Our registered scale technician program is still under development.

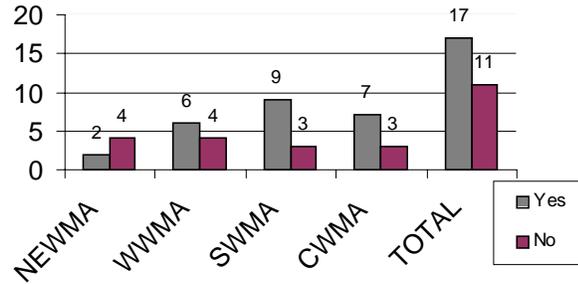
## State Directors' Breakfast Questions and Responses Regarding NTEP Issues

**C9** We register scale service companies but do not conduct any associated training.

**C10** Scale service technicians are registered and their work is tracked in a data base. We also provide the necessary training for scale technicians.

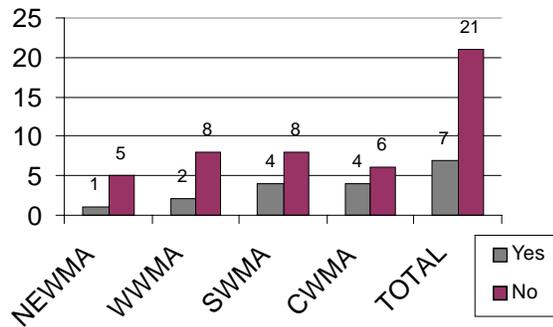
	Yes	No
NEWMA	2	4
WWMA	6	4
SWMA	9	3
CWMA	7	3
<b>TOTAL</b>	<b>24</b>	<b>14</b>

**1998 Question 2: Register Sales Technicians**



	Yes	No
NEWMA	1	5
WWMA	2	8
SWMA	4	8
CWMA	4	6
<b>TOTAL</b>	<b>11</b>	<b>27</b>

**1998 Question 2: Written Tests**





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