INTEGRATION OF WIM INTO NIST HANDBOOK 44

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OVERVIEW

- Motivation
- Project Objectives
- Technical Approach
- Expected Outcomes
TRUCK FLOWS
Weigh-in-motion is a critical component
- Virtual weigh stations
- Smart Roadside Initiative

Differences in practice
- Technologies
- Pavement type
- Maintenance intervals
- Calibration procedures
- Installation techniques
U.S. CMV weight enforcement characteristics:

- Limited enforcement resources
- Inconsistent technology use
- Lack of coordination, shared technologies, and data exchange
- Ineffective penalty and prosecution procedures
- Citations issued vs. reductions in overloading
Increased technology use can improve CMV weight enforcement

- Lack of uniformity
- Lack of prosecution agency acceptance
To develop a proposed amendment to NIST Handbook 44 related to WIM technology

“NIST Handbook 44 contains the specifications, tolerances and other technical requirements for weighing and measuring devices.

It describes how devices will be designed, tested, installed and how they will perform.

It includes scales, meters, grain analyzers, measure containers, taxi meters, timing devices, and more.

Every state adopts NIST Handbook 44 in some form.”

–The National Conference on Weights and Measures
# TECHNICAL APPROACH

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<th>Preparatory</th>
<th>Task 1: Develop Project Work Plan</th>
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<td>Task 2: Establish Working Group</td>
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<td>Task 3: Solicit Stakeholder Input</td>
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<td>Development</td>
<td>Task 4: Draft Proposed “WIM Scale Code”</td>
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<td>Task 5: Submit Supporting Documentation</td>
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Preparatory Tasks (Complete)

Task 1: Develop Project Work Plan
Task 2: Establish Working Group
Task 3: Solicit Stakeholder Input
  ▫ Working Group Outreach Plan
  ▫ Kickoff meeting
Development Task (Underway)

Task 4: Draft Proposed “WIM Scale Code”

- Content
  - Definition
  - Applications
  - General provisions
  - Specifications
  - Notes
  - Tolerances
  - User requirements

The technology’s intended function must be matched with associated acceptable levels of performance.
Task 4: Draft Proposed “WIM Scale Code” (Continued)

- Information sources
  - Working group user requirements workshop (Date and location TBD)
  - Stakeholder input
  - State-of-the-practice review
  - Existing standards/specifications
  - Expert guidance by NIST staff

Task 5: Submit Supporting Documentation to FHWA
WORKING GROUP REPRESENTATION

- State departments of transportation (6)
- State law enforcement agencies (4)
- Prosecution agencies
- Equipment manufacturers/vendors (9)
- Private consultants (2)
- Academic researchers (2)
- Weights and measures regulatory officials (3)
- Federal agencies and organizations (3)
- International counterparts (Fr, NL, Brazil, Cz Repub)
WORKING GROUP CHARTER

- Representation
- Member roles and responsibilities
- Voting eligibility and procedures
- General rules of order
- Communication and information exchange

Working group members will provide input on:
- Focused or comprehensive draft specification language
- Methods or approaches for advancing the draft WIM Scale Code.
NIST HB 44 AMENDMENT process

1. Amendment Proposal Development
2. Regional Amendment Proposal Submission
3. Regional Level Consideration
4. National Amendment Proposal Submission
5. NCWM Interim Meeting Consideration
6. NCWM Annual Meeting Consideration
1. Amendment Proposal Development

- NCWM Form 15 - Proposal to Standing Committee
  - proposed amendment
  - problem that proposed amendment addresses
  - indication of stakeholder support
  - background material, including test data, analyses or other
2. Regional Amendment Proposal Submission

- Submitted to the NCWM Executive Director in Lincoln, NE
- Forwarded to Central, Northeastern, Southern, or Western Weights and Measures Associations for consideration
  - Proposal authors designate at least one regional association where proposal is to be introduced using **NCWM Form 15**
3. Regional Level Consideration

- Regional association holds open hearings followed by committee deliberation to determine agenda items to advance
  - Proposal authors are encouraged to attend these meetings to respond to questions and concerns

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<th>Central</th>
<th>Southern</th>
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<td>Interim</td>
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<td>May</td>
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4. National Amendment Proposal Submission
   - If amendment proposal has merit, regional association forwards to NCWM Committee agenda
   - Due in writing by November 1st

5. NCWM Interim Meeting Consideration
   - All new proposals and carryover items from prior year appear in *NCWM Publication 15* reflecting agenda for NCWM Interim Meeting
   - Standing Committees hold open hearings followed by deliberation

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<td>Annual</td>
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5. **NCWM Interim Meeting Consideration (Continued)**
   - Each proposal assigned a status
     - Voting
     - Informational – may have merit, further input is required
     - Developing – not ready for a vote, remains on agenda
     - Withdrawn
   
   and appears in *NCWM Publication 16* reflecting agenda for NCWM Annual Meeting

6. **NCWM Annual Meeting Consideration**
   - Standing Committees hold open hearings followed by deliberation and subsequent vote
   - Adopted changes incorporated into subsequent edition of *Handbook 44* and enforceable January 1st
Benefits

- Reduced delays for legal/safe trucks
- Increased focus on illegal trucks
- Increased officer credibility in court
- Greater confidence in accuracy of loads weighed
- Improved infrastructure protection
- Reduced conflicts at merge/diverge points
Costs or dis-benefits

- Cost of upgraded WIM in some cases
  - Increased calibration and maintenance
  - Equipment upgrades
  - Concrete slabs may be required

- No visual inspection of bypassing trucks and drivers
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