# CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE Fireplace and Stove Wood CCR Title 4, §§ 4530 - 4536.2

#### INITIAL STATEMENT OF REASONS

December 27, 2019

#### PROBLEM STATEMENT

Many of California's weights and measures laws are based on national uniform model standards adopted by the National Conference on Weights and Measures (NCWM) and published in the National Institute of Standards and Technology (NIST) handbooks. In fact, in many cases the California Legislature requires the Department of Food and Agriculture (Department) to adopt the latest requirements in NIST handbooks, including standards for fireplace and stove wood. Fireplace and stove wood include, but are not limited to, stacked natural wood, packaged natural wood, artificial compressed or processed logs, kindling, stove wood pellets or chips, wood flavoring chips, and other wood used for fuel purposes.

NCWM first adopted national uniform model standards for the method of sale of firewood products in 1975, and, in 1999, sampling and test procedures for stacked and packaged firewood. On numerous occasions since then, NCWM has modified the national uniform model standard for the method of sale and the sampling and test procedures for firewood products. The most recent change occurred in 2016 when NCWM adopted changes to the national uniform model standard for the method of sale of some firewood and stove wood products. The current standard requires sellers to advertise and sell natural firewood and wood flavoring chips packaged in quantities less than one-eighth cord [0.45 m³ (cubic meters) or 16 ft³ (cubic feet)] in terms of a volumetric liter or fraction of a liter. The current standard also permits an additional declarative statement of quantity in terms of a cubic foot or fraction of a cubic foot. As a result of this latest amendment, California's regulation for the method of sale of packaged natural firewood and wood flavoring chips conflicts with the national uniform model standard.

In the past, NCWM modified the sampling and test procedures for packaged and stacked natural firewood, which created slight differences between the national uniform model standard and California's regulation. These slight differences place undue burden on businesses that market firewood products in both California and nationally because

most other states adopt the national uniform model standard as their enforceable state regulation. The differences between the national and California sampling and test procedures have also caused confusion among state and county officials that inspect and test the quantity of these firewood products.

The current California regulation requires packaged natural firewood and any non-compressed, manufactured wood product not greater than six inches in any dimension (e.g. stove wood pellets or chips, and wood flavoring chips) to be sold in terms of a cubic foot or fraction of a cubic foot. California regulation does not provide for the advertising and sale of these products in terms of a liter or fraction of a liter as the standard unit of measure. Therefore, a business that complies with California's regulation is not compliant with the national uniform model standard adopted by other states. Consequently, those businesses cannot sell their packages of natural firewood or wood flavoring chips in other states. Conversely, businesses that advertise in terms of a liter, or fraction of a liter, are compliant with the national uniform model standard, yet are in violation of current California regulation, and therefore cannot sell their packaged natural firewood or wood flavoring chips in California.

With the adoption of this proposed regulation, the Department will remove existing inconsistencies and minor differences among the national uniform model standard and the state's regulation. Aligning California's method of sale requirements and sampling and testing procedures makes consistent the method of sale, advertising, labeling, sampling, and test requirements followed by the firewood industry and enforced by weights and measures officials nationwide.

#### **BACKGROUND**

The United States is unique in that there are no federal weights and measures laws. NIST is a non-regulatory federal agency within the U.S. Department of Commerce. NIST promotes uniformity throughout the U.S. by providing technical advice to NCWM, weights and measures officials, and industry representatives. NCWM is a professional standards-setting organization made up of state and local regulatory officials, manufacturers, representatives of trade associations and individual businesses, consumer groups, federal agencies, and foreign agencies. NCWM develops and adopts uniform weights and measures standards for the U.S., which are then published by NIST in its handbooks. Only when a state adopts these standards into law or regulation do they become enforceable in that state.

The Legislature has charged the Department with the responsibility of supervising weights and measures activities within California in accordance with Business and Professions Code (BPC) Division 5, § 12100. The secretary of the Department is

granted authority in BPC § 12027 to adopt such regulations as is reasonably necessary to carry out the provisions of Division 5 of the BPC. The authority for the secretary to adopt necessary rules and regulations pertaining to the sale or advertisement of wood for fuel purposes is granted in BPC § 12024.11. The Department has historically utilized the "Uniform Regulation for the Method of Sale of Commodities" section in NIST Handbook 130, *Uniform Laws and Regulations in the Areas of Legal Metrology and Fuel Quality* (NIST Handbook 130) for its standards of the method of sale of various commodities marketed in California. BPC § 12609 requires adoption of the packaging and labeling requirements in the current edition of the "Uniform Packaging and Labeling Regulation" (UPLR) section in NIST Handbook 130.

Package checking procedures contained in the NIST handbooks are adopted by reference pursuant to BPC §§ 12211 and 12609. BPC § 12211 requires adoption of NIST Handbook 133, *Checking the Net Contents of Packaged Goods* (NIST Handbook 133), and Firewood package sampling and testing procedures are contained in NIST Handbook 133. Both BPC §§ 12211 and 12609 authorize the Department to make necessary modifications, amendments, or rejections to national uniform model standards through rulemaking activity.

In the early 1990s, an NCWM working group determined that consumers were more familiar with the term liter (I or L) rather than the term cubic decimeter (dm<sup>3</sup>) even though the quantities are identical. In 1994, NCWM adopted the requirement that packages of all commodities subject to the UPLR declare quantity in terms of metric units. At that time, there was consensus that consumer packages subject solely to the UPLR (i.e., those not subject to the federal Fair Packaging and Labeling Act) may be offered for sale only in metric units (customary units may also appear on the principal display panel at the option of the packer). In 2016, NCWM similarly adopted the requirement of declaring metric units in the method of sale requirements for natural packaged firewood and wood flavoring chips in NIST Handbook 130, "Section 2. Non-Food Products, Sections 2.4.3. (a)(1) and (d)." Specifically, NCWM changed the unit of measure of natural firewood and wood flavoring chips packaged in quantities less than one-eighth cord to terms of a liter or fraction of a liter. This standard also allows packaged firewood to permissively include a declaration of quantity in terms of a cubic foot or feet to include fractions of a cubic foot. NCWM's amendment included a Note under Section 2.4.3. (a)(1) allowing for a three-year delay in implementation, to permit the firewood industry to become aware of the changes and to allow for the depletion of current package inventories.

Also in 2016, NCWM modified the sampling and test procedures of stacked and packaged natural firewood published in NIST Handbook 133. As a result, the national uniform model standard adopted and incorporated by reference in the California Code of Regulations (CCR) § 4600 (NIST Handbook 133 requirements) is now slightly different than the state's original firewood regulation in CCR §§ 4535 - 4536.2. The national uniform model standard adopted in accordance with CCR § 4600 is the latest requirements published in NIST Handbook 133, "Chapter 3. Test Procedures – For Packages Labeled by Volume, Section 3.14. Firewood – Volumetric Test Procedure for Packaged Firewood with a Labeled Volume of 113 L [4 ft³] or Less and Stacked Firewood Sold by the Cord or Fractions of a Cord." The Department proposes to resolve this regulatory conflict by repealing CCR §§ 4535 - 4536.2 and defer to the adoption and incorporation by reference of the currently published sampling and test procedures in NIST Handbook 133, Section 3.14., inclusive.

Harmonizing California regulation with the national uniform model standard addresses the needs of the firewood industry to market similarly labeled and advertised packages of natural firewood and wood flavoring chips regionally and/or nationwide. This proposed regulation also removes confusion among state and county regulators who test stacked and packaged firewood.

#### LEGISLATIVE AND EXECUTIVE HISTORY

Assembly Bill (AB) 3218 (Tanner, Statutes of 1982, Chapter 758) directs the secretary of the Department to adopt necessary rules and regulations pertaining to the sale or advertisement of wood for fuel purposes in BPC § 12024.11.

<u>California Hotwood, Inc. v. Henry Voss, et al.</u> (Super. Ct. San Joaquin County, 1991, No. 234613) decided that the Department had jurisdiction to set volumetric test procedures for stacked and packaged natural firewood. The Department was ordered to adopt necessary rules and regulations pertaining to the sale or advertisement of firewood and to standardize quantities of measurement of firewood.

AB 592 (Areias, Statutes of 1993, Chapter 621) requires the secretary of the Department to adopt by reference the current edition of the "Uniform Packaging and Labeling Regulation" section in NIST Handbook 130 in BPC § 12609.

AB 1175 (Morrissey, Statutes of 1995, Chapter 156) requires the secretary of the Department to adopt by reference the current edition of NIST Handbook 133 in BPC § 12211. It must be noted that the 1995 edition of NIST Handbook 133 did not yet include sampling and test requirements of firewood products. As explained below, those requirements were added to NIST Handbook 133 in 1999.

#### **REGULATORY HISTORY**

In 1990, the Department renumbered the method of sale requirements for the advertisement and sale of firewood from CCR § 4502 to CCR § 4531. No other amendments to the method of sale of firewood requirements in CCR § 4531 have been made since then.

In 1995, as a result of the above-mentioned superior court decision, the Department worked with California's firewood industry to adopt the sampling and test procedures for stacked and packaged firewood found in CCR §§ 4535 - 4536.2. That regulation became effective in early-1996. NCWM had not yet adopted sampling and test procedures for stacked and packaged firewood in NIST Handbook 133.

In 1998, California's regulation for was presented to the NCWM for consideration as the national uniform model standard for sampling and test procedures for firewood. It was adopted that year and first appeared in NIST Handbook 133 in 1999. Since then, NCWM has made minor modifications to NIST Handbook 133. At this time, the NIST Handbook 133 sampling and test procedures for firewood are slightly different than those in CCR §§ 4535 - 4536.2.

#### PURPOSE AND NECESSITY OF THE PROPOSED REGULATION

The purpose and necessity of this proposed regulation is to have the Department's regulation match NCWM requirements adopted by other states. Harmonizing California's regulation with the national uniform model standards in NIST Handbooks 130 and 133 provides consistency in the marketplace, creates efficiencies for businesses that package and sell wood for fuel purposes, and reduces potential trade barriers for firewood businesses operating in multiple states.

The Department proposes to repeal CCR §§ 4530 - 4536.2 and adopt by reference the requirements in the 2019 edition of NIST Handbook 130 for the method of sale of fireplace and stove wood, including additional requirements for kindling. The proposed regulation repeals the original sampling and test procedures, and reaffirms California's adoption and incorporation by reference in CCR § 4600 of the sampling and test procedures of stacked and packaged natural firewood published in the current edition of NIST Handbook 133. The following are specific reasons for modifying the text:

#### Article 3. Wood for Fuel Purposes.

The Department proposes to change the title of Article 3 from "Wood for Fuel Purposes" to "Fireplace and Stove Wood" to be consistent with the current title of Section 2.4. in the "Uniform Regulation for the Method of Sale of Commodities" section in NIST Handbook 130.

#### § 4530. Definitions.

The Department proposes to repeal the definitions in this section. These definitions are unnecessary because similar definitions in Section 2.4. of the "Uniform Regulation for the Method of Sale of Commodities" section in NIST Handbook 130 are more comprehensive and incorporate current terminology. The current definitions are now different enough to possibly create confusion among the firewood industry and weights and measures officials.

Since CCR § 4530 is the first available section in Article 3, the Department proposes to use it to adopt and incorporate by reference the 2019 edition of NIST Handbook 130, "Section 2.4. Fireplace and Stove Wood.," inclusive, pursuant to BPC § 12024.11. The Department proposes to change the title of this section to "Method of Sale" to remain consistent with the adoption and incorporation of the method of sale requirements in NIST Handbook 130. Similar authority and reference sections in the Note of this section still apply because those citations include authority to promulgate regulations regarding the method of sale, advertising, and labeling requirements of firewood products. This proposed change will make California regulation consistent with the national uniform model standard for the method of sale of firewood products.

### § 4531. Method of Sale.

The Department proposes to repeal the current method of sale requirements in this section. This section provides for packaged natural firewood and wood flavoring chips sold in quantities less than one-eighth cord to be sold in terms of a cubic foot or fraction of a cubic foot. Modifications made in 2016 to NIST Handbook 130 require businesses to sell these firewood products in terms of a liter or fraction of a liter, and permissively declare the quantity in terms of a cubic foot or fraction of a cubic foot. The current method of sale requirements of artificial compressed or processed logs and stove wood pellets or chips do not differ from the national uniform model standard method of sale requirements. With this proposed regulation the Department adopts and incorporates by reference in CCR § 4530 all method of sale requirements for fireplace and stove wood published in the 2019 edition of NIST Handbook 130, Section 2.4., inclusive.

The Department proposes to use this section to renumber and retain, with modifications, the requirement for reporting the quantity of kindling included on the label, sales invoice, or delivery ticket as currently mandated in CCR § 4533. This requirement is not included in NIST Handbook 130, so it is necessary to keep it to protect California consumers from, intentionally or unintentionally, receiving a quantity of kindling greater or less than expected as part of the transaction. It is also necessary to rename the title to "Additional Requirements for Kindling" to keep it consistent with the topic of this requirement. The Department adds the modified phrase, "of packaged or

non-packaged fireplace or stove wood" to this section to further clarify and specify that this requirement applies to all types of fireplace and stove wood commodities sold having kindling included as part of the transaction.

In addition to the current authority and reference citations in the Note in CCR § 4533, the Department proposes to add BPC § 12609 as a reference. That section of law adopts and incorporates by reference the latest requirements for the labeling of packaged commodities in the "Uniform Packaging and Labeling Regulation" section of NIST Handbook 130, which would also apply to packaged firewood. It is necessary to add that reference citation to the Note because the existing regulation requires packaged firewood to have the volume declaration in terms of U.S. customary units (cubic foot), and the proposed regulation would mandate metric units, in accordance with the "Uniform Regulation for the Method of Sale of Commodities" and the "Uniform Packaging and Labeling Regulation" sections in NIST Handbook 130.

#### § 4532. Invoice.

The Department proposes to repeal the current invoice requirements in this section. The Department proposes to align California's invoice requirements with the national uniform model standard requirements for invoices in NIST Handbook 130, Section 2.4., inclusive, by adopting them in CCR § 4530 of this proposed regulation. The invoice requirements in NIST Handbook 130 are more extensive than the current invoice requirements in California regulation. The name and address of the purchaser and the identity of product being sold are additional mandatory invoice requirements in NIST Handbook 130. These additional requirements are necessary to identify the individual purchasing the firewood and establish the species or components of individual species of firewood being sold.

The Department proposes to use this section to adopt and incorporate by reference the current edition of NIST Handbook 133, *Checking the Net Contents of Packaged Goods*, "Chapter 3. Test Procedures – For Packages Labeled by Volume, Section 3.14. Firewood – Volumetric Test Procedure for Packaged Firewood with a Labeled Volume of 113 L (Liters) [4 ft³ (Cubic Feet)] or Less and Stacked Firewood Sold by the Cord or Fractions of a Cord," inclusive. It is necessary to align California's requirements for sampling and test procedures for firewood with the national uniform model standard to remove confusion among state and county officials regarding the slightly different requirements that currently exist between California's sampling and test procedures and those adopted nationally.

The Department proposes to rename the title to "Volumetric Sampling and Test Procedures" to make specific that this proposed section includes volumetric sampling and test procedures of stacked and packaged firewood. The authority citations added to the Note of this section include more specificity to the existing broad authority to adopt rules and regulations to enforce the weights and measures laws in the BPC.

The Department proposes to modify the current requirement in CCR § 4533, move it to CCR § 4531, and repeal the remaining sections of this article. CCR § 4534 is effectively replaced with the proposed adoption and incorporation by reference of the requirements published in the 2019 edition of NIST Handbook 130, Section 2.4., inclusive. CCR §§ 4535 - 4536.2, inclusive, are effectively replaced with CCR § 4600 as it already adopts and incorporates by reference the requirements published in the current edition

§ 4533. Kindling. through § 4536.2. Bundles and Bags of Firewood., inclusive.

adopts and incorporates by reference the requirements published in the current edition of NIST Handbook 133, Section 3.14., inclusive. These changes will make California's requirements consistent with the national uniform model standard for method of sale of all firewood and stove wood products, and sampling and test procedures of stacked and packaged natural firewood. The phrase, "[Repealed]" is added to the proposed repealed section titles of the remainder of the article to prompt readers that these sections are no longer applicable or enforceable after adoption of this proposed regulation.

#### **ECONOMIC IMPACT ASSESSMENT**

The Department identified 262 businesses, large and small, in California that sell all types of firewood and stove wood products. Businesses that do not meet the definition of a small business as defined in California Government Code Title 2, Chapter 3.5, § 11346.3 (b)(4)(B) are considered large businesses. Of the 262 identified businesses, the Department considered 12 to be large businesses and 250 to be small businesses. The stacked natural firewood industry, artificial compressed or processed log industry, and the stove wood pellets and chips industry will not be directly affected by this proposed regulation. However, businesses that package natural firewood and wood flavoring chips in quantities less than one-eighth cord will incur nominal costs to modify their advertising and package labels. This proposed regulation requires that packages of natural firewood and wood flavoring chips sold in quantities less than one-eighth cord be advertised and sold in terms of a liter or fraction of a liter, and permissively in terms of a cubic foot or fraction of a cubic foot.

#### Large Businesses

Some of the 12 large businesses identified by the Department already advertise and sell packaged firewood or wood flavoring chips in terms of a liter, or fraction of a liter. Those businesses are not directly impacted by this regulation. The Department determines there will be nominal impact to the remainder of the large businesses that currently

advertise and sell firewood products only in terms of a cubic foot or fraction of a cubic foot. To comply with this proposed regulation, those large businesses may simply modify an existing package label or print a new one. The Department interviewed some firewood businesses and determined that the business can minimally purchase an ink pad and a custom ink stamp with the correct volume declaration in terms of liters to modify their existing package labels. Doing so limits the company's initial costs to comply by allowing them to use their remaining sock of package labels without necessarily having to print new ones. The Department determines with a minimum of effort and investment, an individual large business may incur a cost of about \$20 for a custom stamp and about \$40 for ample supply of ink, totaling about \$60 per individual business. Any additional effort or cost to comply, beyond the stated minimum, is at the discretion of the business owner and not a requirement of this proposed regulation. Once each business exhausts its supply of existing labels, it can order appropriate labels to remain compliant with this proposed regulation. Costs incurred to order future supplies and labels are not considered part of this proposed regulation.

#### Small Businesses

The Department identified 250 small businesses that sell various firewood and stove wood products in California. Approximately 30 of those small businesses sell packaged natural firewood or wood flavoring chips in quantities less than one-eighth cord. Most small businesses in California that sell packaged natural firewood or wood flavoring chips in quantities less than one-eighth cord, advertise the volume in terms of a cubic foot; not in terms of a liter. Like a large business, a small business will incur nominal upfront costs to be compliant. A small business will similarly need to modify existing labels on the packages of natural firewood or wood flavoring chips to advertise the volume in terms of a liter. After modifying and using existing labels, the business can purchase compliant ones. As with a large business, the estimated cost per individual small business is about \$60.

### Statewide Impact to Large and Small Businesses

Statewide, all 12 large businesses may incur approximately \$720 total costs ( $12 \times $60$ ) to modify existing stock of package labels and the affected 30 small businesses may incur a cost of about \$1,800 ( $30 \times $60$ ) to comply with this proposed regulation. The Department estimates the statewide economic impact of this proposed regulation on both large and small firewood businesses to be approximately \$2,520 (\$720 + \$1,800) to comply in the first three fiscal years with little to no costs incurred thereafter.

#### Creation or Elimination of Jobs within California

The proposed regulation will not create nor eliminate jobs at large and small firewood businesses in California. Although slightly different from the national standards, method of sale and advertising requirements already exist in California regulation, and both large and small businesses are required to comply with California's current requirements. The proposed regulation simply changes the advertising and labeling requirements of firewood products, and will only incur a nominal impact that is not great enough to eliminate or create jobs.

# Creation of New Businesses or the Elimination of Existing Businesses in California

The packaged natural firewood industry and wood flavoring chips industries are part of the state's economy and the larger national economy. Any out-of-state firewood businesses that have not previously conducted business in California due to the differing regulations may choose to expand their market share into the state. Existing California businesses will not experience the elimination or creation of new business in the state with this proposed regulation. This regulation simply changes the advertising requirements on packaged natural firewood and flavoring chips sold in the state. Products like artificial compressed or processed logs and stove wood pellets or chips are not directly affected by the proposed regulation.

### Expansion of Businesses Currently Doing Business in California

This proposed regulation may promote the expansion of California businesses. By harmonizing California's regulation with the national uniform model standard published in NIST Handbooks 130 and 133, the proposed regulation is expected to encourage existing California businesses to expand sales of their firewood products into other states that adopt the national uniform model standard for the method of sale and test procedures of firewood.

Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment

The Department determines there will be no significant benefit to the health and welfare of California residents, worker safety, and the state's environment due to the adoption of this regulation.

# Other Benefits of the Regulation

As stated, the firewood industry is part of the national economy. Varying regulatory requirements between states create adverse impacts on businesses engaged in

interstate commerce. Therefore, it is imperative to create a uniform, national marketplace for businesses to operate. The proposed regulation will help eliminate any potential trade barriers.

In addition to the benefits that businesses will experience, there are other benefits to the Department. The Department already adopts NIST Handbook 133 by reference. Repealing CCR §§ 4535 - 4536.2 removes the conflict between national requirements and California's requirements for the volumetric sampling and testing of stacked and packaged natural firewood. Weights and measures officials in California will apply the same procedures as regulators in other states that adopt the national uniform model standards.

# REASONABLE ALTERNATIVES TO THE REGULATIONS AND THE DEPARTMENT'S REASONS FOR REJECTING THOSE ALTERNATIVES

The Department must determine that no reasonable alternative it considered or that has otherwise been identified and brought to its attention would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law. The alternative described below applies to impacts to small and large businesses in California.

## Alternative 1 – Do Nothing

Doing nothing allows confusion to persist among the stacked and packaged firewood industry because the Department's regulations do not reflect the changes made by NCWM in 2016, and are now in conflict with the national uniform model standards published in NIST Handbooks 130 and 133. The difference in the requirements could potentially prevent the California firewood industry from expanding into other states, and firewood businesses in other states from expanding into California. Retaining CCR §§ 4535 - 4536.2 continues the conflict between national requirements and California's requirements for the volumetric sampling and testing of stacked and packaged natural firewood, which also fosters confusion about which standards to apply.

Adopting this proposed regulation will eliminate confusion in the industry, harmonize requirements for the sale, advertising, and testing of firewood, and promote an expanded marketplace.

# PERSCRIPTIVE REQUIREMENTS

This proposed rulemaking adopts specific requirements for the labeling, advertising, and sale of firewood. It is necessary to prescribe strict regulatory requirements on firewood businesses, large and small, to establish a fair, competitive, and transparent marketplace. The specific requirements provide consumers an opportunity to make informed, value-based, comparative decisions about the quality and price of fireplace and stove wood purchases. The proposed sampling and test procedures must also be specific and in accordance with NIST Handbook 133, which are prescriptive and already adopted by reference. Performance standards are not a reasonable alternative to having specific requirements because they would heighten inconsistencies and confusion with the advertising and sale of firewood, as well as increase inaccuracies in the sampling and testing of those commodities.

The Department has not identified any other reasonable alternative than the proposed regulation.

# EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESSES

The Department is aware of nominal costs that affect large and small firewood businesses. Large and small businesses will have to modify their package labels to meet the proposed requirements. As discussed in the *ECONOMIC IMPACT ASSESSMENT* section above, at little to no initial cost, the industry can easily modify labels from declaring volumetric quantity in terms of a cubic foot to terms of a liter. There are no ongoing annual costs to large or small businesses, thereafter.

The California firewood industry is already subject to the volumetric sampling test procedures for both stacked and packaged natural firewood found in NIST Handbook 133; therefore, they will not be adversely affected.

# TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, REPORTS, OR DOCUMENTS

The Department relied on the following documents to draft the proposed regulatory language of this rulemaking:

1. Superior Court of California, County of San Joaquin, https://www.sjcourts.org/, *California Hotwood, Inc. v. Henry Voss, et al.* (Super. Ct. San Joaquin County, 1991, No. 234613), court docket copied on 7/26/19.

- National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, "Report of the 60<sup>th</sup> National Conference on Weights and Measures," as Adopted by the 60<sup>th</sup> National Conference on Weights and Measures, NBS Special Publication 442, 1975, https://www.nist.gov/pml/weights-and-measures/publications/ncwm-annual-reports, Laws and Regulations Committee agenda item 6, amendment to NIST Handbook 130, accessed by CD on 11/4/19.
- 3. National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, "Report of the 61st National Conference on Weights and Measures," as Adopted by the 61st National Conference on Weights and Measures, NBS Special Publication 471, 1976, https://www.nist.gov/pml/weights-and-measures/publications/ncwm-annual-reports, Laws and Regulations Committee agenda item 3, amendment to NIST Handbook 130, accessed by CD on 11/4/19.
- 4. National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, "Report of the 76<sup>th</sup> National Conference on Weights and Measures," as Adopted by the 76<sup>th</sup> National Conference on Weights and Measures, NIST Special Publication 816, 1991, https://www.nist.gov/pml/weights-and-measures/publications/ncwm-annual-reports, Laws and Regulations Committee agenda item 232-8, amendment to NIST Handbook 130, accessed by CD on 11/4/19.
- 5. National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, "Report of the 83<sup>rd</sup> National Conference on Weights and Measures," as Adopted by the 83<sup>rd</sup> National Conference on Weights and Measures, NIST Special Publication 932, 1998, https://www.nist.gov/pml/weights-and-measures/publications/ncwm-annual-reports, Laws and Regulations Committee agenda item 250-8, amendment to NIST Handbook 133, accessed by CD on 11/4/19.
- 6. National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, "Report of the 95<sup>th</sup> National Conference on Weights and Measures," as Adopted by the 95<sup>th</sup> National Conference on Weights and Measures, NIST Special Publication 1115, 2010, https://www.nist.gov/pml/weights-and-measures/publications/ncwm-annual-reports, Laws and Regulations Committee agenda item 232-1, amendment to NIST Handbook 130, accessed by CD on 11/4/19.
- 7. National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, "Report of the 101st National Conference on Weights and Measures," as Adopted by the 101st National Conference on Weights and Measures, NIST Special Publication 1212, 2016,

https://www.nist.gov/pml/weights-and-measures/publications/ncwm-annual-reports, Laws and Regulations Committee agenda item 232-4, amendment to NIST Handbook 130, and Laws and Regulations Committee agenda item 260-3, amendment to NIST Handbook 133, and Executive Summary of Proposed Amendments to NIST Handbook 133, Section 3.14. "Firewood" and NIST Handbook 130, Uniform Method of Sale of Commodities Regulation, Section 2.4 "Fireplace and Stove Wood," accessed by CD on 11/4/19.

- National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, NIST Handbook 130, Laws and Regulations in the Areas of Legal Metrology and Fuel Quality, 2019 edition, "IV. Uniform Regulations, B. Uniform Regulation for the Method of Sale of Commodities, Section 2.4. Fireplace and Stove Wood," https://www.nist.gov/pml/weights-and-measures/publications/nisthandbooks/other-nist-handbooks/other-nist-handbooks-1, accessed on 11/4/19.
- 9. National Institute of Standards and Technology, OWM, https://www.nist.gov/pml/weights-and-measures, NIST Handbook 133, Checking the Net Contents of Packaged Goods, 2019 edition, "Chapter 3. Test Procedures – For Packages Labeled by Volume, Section 3.14. Firewood – Volumetric Test Procedure for Packaged Firewood with a Labeled Volume of 113 L [4 ft3] or Less and Stacked Firewood Sold by the Cord or Fractions of a Cord," https://www.nist.gov/sites/default/files/documents/2019/01/31/12-chptr3-19-h133final.pdf, accessed on 11/4/19.