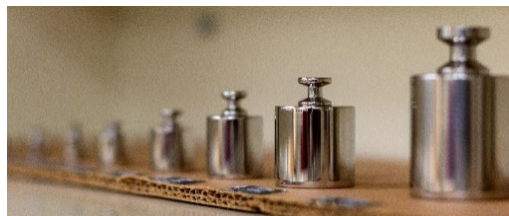




Annual Report to the Legislature

Division of Measurement Standards



FISCAL YEAR 2018 / 19

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Statement of the Secretary



Karen Ross, Secretary

Pursuant to California Business and Professions Code, Division 5, Section 12102, enclosed is the Fiscal Year 2018 / 2019 Annual Report to the Legislature for California's weights and measures activities.

The California Department of Food and Agriculture (CDFA), Division of Measurement Standards (DMS) is responsible for the enforcement of California weights and measures laws designed to:

- Ensure the accuracy and reliability of weighing and measuring devices;
- Protect sellers and buyers of bulk and packaged commodities; and
- Enforce quality, advertising, and labeling standards for fuels and automotive products, including alternative and zero-emission fuels.

DMS works closely with county sealers of weights and measures who, under the supervision and direction of CDFA, carry out most of the weights and measures enforcement activities at the local level. The compilation and analysis of enforcement data contained in this report illustrates our statewide commitment to protecting consumers and the integrity of commerce.

If you or your staff have additional questions regarding any of these materials, or if additional information is needed, please do not hesitate to call us at (916) 654-0433.

Executive Summary

According to the U.S. Department of Commerce, transactions involving weights and measures touch upon virtually every aspect of economic life, attributing to approximately half of the U.S. gross domestic product (GDP). While 11 percent (11%) of Americans live in California, the state contributed 14.5 percent (14.5%) to the U.S. GDP in 2018. California's GDP grew to \$2.75 trillion that year. The programs administered by the California Department of Food and Agriculture's (CDFA) Division of Measurement Standards (DMS) directly impact nearly \$1.5 trillion of statewide economic activity.

Ensuring fair and accurate transactions is critical to a robust and reliable economy. To effectively oversee the over 1.6 million registered commercial devices in California, a state/county system of enforcement is necessary. Of the 58 counties in California, six county offices of weights and measures have paired up to coordinate their oversight efforts. The adjacent counties of Sierra/Plumas, Inyo/Kern, and Alpine/El Dorado are the three pairs of counties to combine oversight. DMS partners closely with the resulting 55 county offices of weights and measures, which under the authority and direction of the CDFA Secretary, carry out

the majority of weights and measures enforcement activities at the local level.

In many of its programs DMS' role is to provide oversight, support, coordination, and technical training to county sealers and their staff. The state/county system of enforcement, with DMS overseeing those efforts, ensures uniform application of weights and measures laws and regulations statewide.

Enforcement authority is clearly delineated between DMS and county offices of weights and measures through a memorandum of understanding, so as not to overlap or duplicate efforts. Several programs are administered primarily by county sealers and others directly by DMS.

***California Weights and Measures impacts
\$1.5 trillion of the state's GDP***

The following report is a compilation of both state and county activities relating to weights and measures activities in the fiscal year (FY) 2018/19.

Cost Per Capita

Statewide, DMS and county sealers coordinate their regulatory oversight and commit significant resources to protect the California marketplace. The cost per capita is the statistical ratio of weights and measures expenditures to the population of California. The California population used for this statistic was collected from the California Department of Finance's [Estimates](#) webpage.

The cost per capita includes the state's and counties' efforts (\$0.17 per person, per year, and \$1.32 per person, per year, respectively). For a total of \$1.49 per person per year, California consumers are

protected from intentional or unintentional fraud and unfair business practices, and California businesses may operate confidently in a marketplace that is fair, transparent, competitive, and equitable for each business owner.

The enforcement efforts of weights and measures officials protect both business owners and buyers of goods and services that are sold by weight, measure, or count. The detailed allocation of program hours and expenditures by DMS and each county in their weights and measures enforcement activities are represented in Appendix A.



Figure 1: Cost per capita to enforce weights and measures laws

Introduction



Acronyms and Abbreviations

AMS – Agricultural Marketing Service, administered by USDA

BPC – California Business and Professions Code

CDFA – California Department of Food and Agriculture

COOL – Country of Origin Labeling Program, administered by the USDA/AMS

CTEP – California Type Evaluation Program

DMS – Division of Measurement Standards, within CDFA

FLAPP – Fuels, Lubricants, and Automotive Products Program

FY – Fiscal Year; July 1 through June 30

GDP – Gross Domestic Product

NCWM – National Conference on Weights and Measures

NIST – National Institute of Standards and Technology

NOV – Notice of Violation

NTEP – National Type Evaluation Program

RSA – Registered Service Agency / Registered Service Agent

USDA – United States Department of Agriculture

Definitions

The following definitions are technical and industry trade terms that are defined either in Division 5 of the BPC; NIST Handbook 44, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*; or DMS within the scope and purpose of this report.

Accurate – A piece of equipment is “accurate” when its performance or value – that is, its indications, its deliveries, its recorded representations, or its capacity or actual value, etc., as determined by tests made with suitable standards - conforms to the standard within the applicable tolerances and other performance requirements. Equipment that fails so to conform is “inaccurate” (NIST Handbook 44).

Alternative Fuel – The following list of motor vehicle fuels: Biodiesel; Biodiesel Blend; Dimethyl Ether; Electricity; Ethanol; Ethanol Fuel Blend; Hydrogen; Methanol Fuel Blend; Natural Gas; Propane; and other alternative fuels as determined by the CDFA Secretary are defined as alternative fuels (BPC Section 13400).

Commercial Equipment / Commercial Device / Device – Weights, measures, and weighing and measuring devices, instruments, elements, and systems or portion thereof, used or employed in establishing the measurement or in computing any basic charge or payment for services rendered on the basis of weight or measure. As used in this definition, measurement includes the determination of size, quantity, value, extent, area, composition (limited to meat and poultry), constituent value (for grain), or measurement of quantities, things, produce, or articles for distribution or consumption, purchased, offered, or submitted for sale, hire, or award (NIST Handbook 44 and BPC Section 12531).

Correct / Correctly – A piece of equipment is “correct” when, in addition to being accurate, it meets all applicable specification requirements. Equipment that fails to meet any of the requirements for correct equipment is “incorrect” (NIST Handbook 44).

Sealer – “Sealer,” when used without qualification, includes the State Sealer, county sealers and their deputies and inspectors (BPC Section 12008).

Service Agency – “Service agency” means a person, as defined in BPC Section 12011, that for hire, award, commission, or any other payment or any kind, repairs a commercial device (BPC Section 12531).

Service Agent – “Service agent” means a person employed by a service agency to repair a commercial device (BPC Section 12531).

Skimmer – A mechanical or computing device installed on or in a commercial device or its point of sale component, that is not part of the manufacturer’s design specification, used to illegally capture consumer data from the magnetic strip of a payment card; installed at ATMs, fuel dispensers, and other commercial devices equipped with a point of sale component (defined by DMS within the scope and purpose of this report).

Specification – A requirement usually dealing with the design, construction, or marking of a weighing or measuring device. Specifications are directed primarily to the manufacturers of devices (NIST Handbook 44).

Tolerance – A value fixing the limit of allowable error or departure from true performance or value (NIST Handbook 44).

Enforce / Enforcement / Enforcement Action – Actions of a sealer, allowed by statute or regulation, that may be punitive, non-punitive, or administrative against a regulated party that is observed to be out of compliance with statute or regulation. Some examples of enforcement action include issuing the regulated party a(n): Notice of Violation; Administrative Civil Penalty, Citation, Civil/Criminal Complaint, or revocation of a registration or license (defined by DMS within the scope and purpose of this report).

DMS Programs



Metrology

Metrology is the science of measurement. CDFA is required to maintain the state's standards of measurement: mass, volume, distance, time, temperature, and energy. These standards are maintained in the accredited DMS Metrology Laboratory and are directly traceable to the national standards held at the National Institute of Standards and Technology (NIST), an agency within the United States Department of Commerce.



Photo 1: 500 lb. standard weights being certified

The NIST standards trace back to the international standards agreed upon by the International Bureau of Weights and Measures (BIPM, Bureau International des Poids et Mesures) in France. With measurement traceability linking U.S. and international standards, there is uniformity of measurements worldwide. Since many commodities and goods produced here are

destined for international markets, the work of the Metrology Laboratory supports California's export economy.



Photo 2: 5-gallon standard measures to test the delivery of liquid fuel (prover)

The chief purpose of the DMS Metrology Laboratory is to certify standards of weights and measures used statewide by county sealers to test commercial weighing and measuring devices within their respective jurisdictions. The Metrology Laboratory also certifies standards for private businesses that install, repair, and service weighing and measuring devices used in wholesale production facilities, distribution centers, and retail establishments.

The Metrology Laboratory tests and certifies approximately 4,000 standards each year. FY 2018/19 is no exception; it

tested 3,706 county standards and 555 industry standards totaling 4,261 certifications completed. Since most commodities are bought or sold by weight or measure, certified state and county standards form the legal basis for most commercial transactions in California.



Photo 3: County sealer using a crane to move standard weights

Use of inaccurate standards by an official can result in a device operating incorrectly, causing financial harm to either buyer or seller, overturned enforcement actions or court cases, and financial liability for the county sealer's office.

Type Evaluation

Before any new type of weighing or measuring device can be sold or used for commercial purposes in California, it must be evaluated and approved by DMS. Type

evaluation certifies that the design and performance of a new commercial weighing or measuring device is suitable for its intended use, is accurate, operates correctly, has all required markings, and prevents the facilitation of fraud. It is unlawful for any unapproved device to be placed into commercial use.

After completion of a successful evaluation, the manufacturer may sell the device for commercial use anywhere in California. In FY 2018/19, DMS performed type evaluations on 58 new devices. Every year, manufacturers from all over the world submit devices to DMS' CTEP laboratory for type evaluation. Figure 2, on the following page, shows a map of device manufacturers across the U.S. and the world that applied for type evaluation in FY 2018/19.

CTEP

DMS' California Type Evaluation Program (CTEP) evaluates a device according to California's regulations which, in some cases, differ from other states' requirements. Once a device is CTEP approved it receives a Certificate of Approval. In FY 2018/19, the CTEP program received 29 applications requesting CTEP type evaluation. Most applicants are U.S. based but this year companies from Denmark, Ireland, and Canada applied for California evaluation.

NTEP

In addition to evaluating new devices destined for the California marketplace, DMS' CTEP laboratory is also a participating National Type Evaluation Program (NTEP) laboratory. NTEP is administered by the National Conference on Weights and Measures. As an NTEP

approved laboratory, DMS is authorized to evaluate weighing and measuring devices intended for the national marketplace. Certificates of Conformance issued under NTEP are accepted in all states and U.S.

territories. In FY 2018/19, NTEP assigned DMS 29 device evaluations. Of those, three were from device manufacturers located in Denmark, Switzerland, and England (UK).

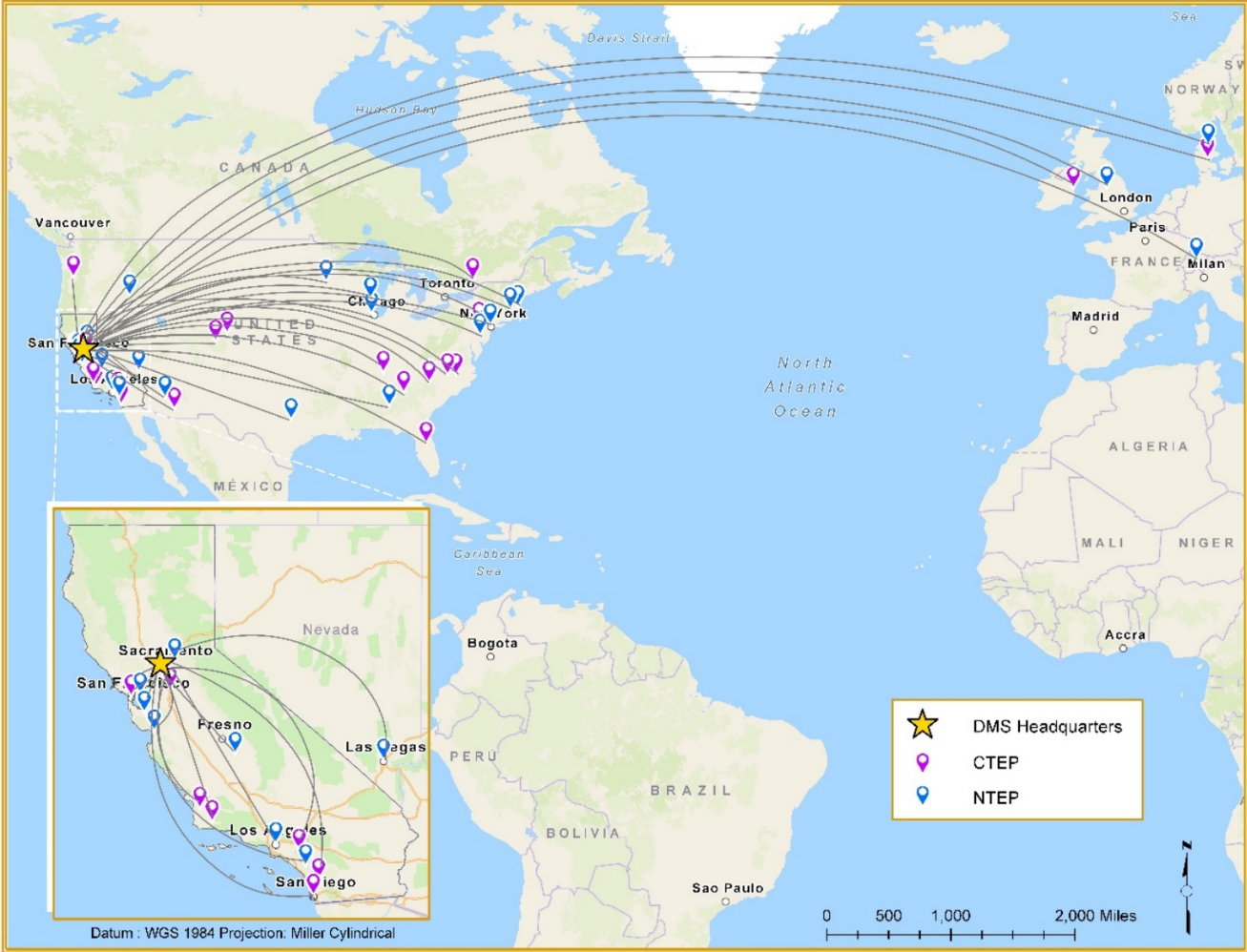


Figure 2: FY 2018/19 world map of device manufacturers that applied for either CTEP or NTEP type evaluation



dms protects

DEVICE MANUFACTURERS



Devices

Since the determination of weight or measure directly impacts the cost of most goods and services bought and sold, one of the most fundamental obligations of state government to its citizens is the effective oversight of commercial weighing and measuring devices. Examples of common devices include supermarket

scales, gasoline dispensers, vehicle and livestock scales, taximeters, and propane meters, to name a few. Devices recently introduced into the marketplace include hydrogen fuel dispensers, electric vehicle charging stations, and mobile applications used for personal transportation, e.g., Uber and Lyft. Table 1 lists some of the commonly used commercial devices in the state.

Table 1: FY 2018/19 Common Commercial Device Types in California

Measuring Devices	Number of Devices (Statewide)	Compliance Rate (%)
Electric Submeter	25,402	93
LPG	3,237	85
Odometer	2,828	97
Retail Motor Fuel (Gas Pump)	212,143	94
Retail Water	9,313	90
Taximeter	5,300	95
Vapor Submeter	21,996	87
Water Submeter	71,377	90

Weighing Devices	Number of Devices (Statewide)	Compliance Rate (%)
Computing and Counter (combined)	75,712	94
Dormant Platform	18,101	89
Livestock	1,201	88
Prescription / Jewelry	3,437	94
Vehicle	5,584	84

In FY 2018/19, over 1.6 million weighing and measuring devices used in commerce were registered by California’s county offices of weights and measures.



Photo 4: Testing a vehicle scale using certified standard weights
Source: N. Reade, Inyo/Mono County Sealer

County sealers are responsible for inspecting and testing all commercial devices in their jurisdiction.



Photo 5: Official seal of Napa County

Devices found to be accurate and correct will receive an official county seal (approval sticker). See example seal above from Napa County Department of Weights and Measures.



Photo 6: Old livestock beam scale. Note all the county seals it has received over the years

Devices are first tested upon installation. After that, they receive regular testing on an established schedule, but sealers may also test them due to a complaint.

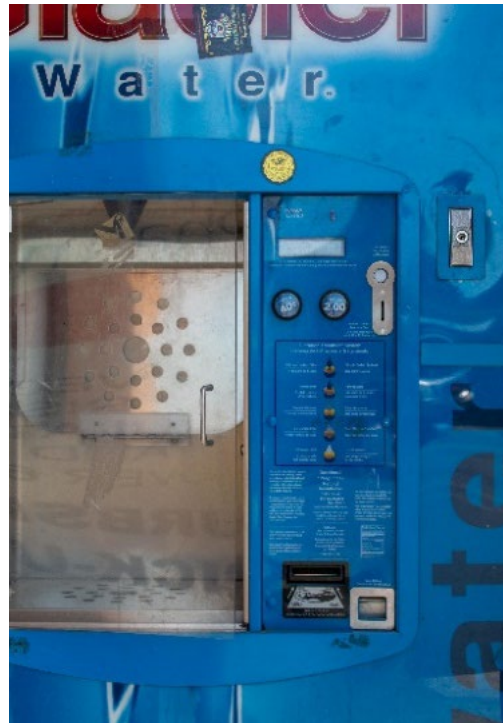


Photo 7: Accurate retail water meter with a county seal

See Tables 5 and 6 in Appendix B for complete counts of measuring and weighing devices by county.

Registered Service Agencies

Business owners of commercial weighing and measuring devices must ensure their equipment always operates properly, not just when inspected. They rely on companies that specialize in device installation, service, and repair. The DMS Registered Service Agency (RSA) program oversees the work of these companies and their employees.



Photos 8 and 9: RSA making repairs to gas dispenser; after the repair it is tested using a certified standard (prover)

RSA companies must register with DMS and prove they have sufficient certified standards for the work they perform. Their employees must pass an exam and be licensed before they may legally work in California.

After completing their work, RSAs have the authority to place a device into service pending official inspection by a weights and measures official. This minimizes device downtime and business interruption after installation or repair. In FY 2018/19, the RSA program registered 550 RSAs and licensed 2,522 agents (employees).

Fraud Prevention

A major method of fraud in California is consumer theft by means of a payment card “skimmer.” According to the National Association of Convenience Stores (NACS), seventy-five percent (75%) of all purchases at gas stations are made using a credit or debit card.

There are two types of skimmers: an external keypad overlay skimmer that matches up with the buttons of the legitimate keypad below it, and an internal skimmer installed inside the fuel dispenser. Internal skimmers are far more common at gas stations; they are virtually undetectable by the consumer at the time of purchase and can be installed in seconds.



Photo 10: Skimmer – External, keypad overlay



Photo 11: Skimmer – Internal, wireless communication

Payment card information collected from each transaction is used by criminals to make counterfeit cards which can then be used to drain consumers’ bank accounts or make fraudulent in-store or internet purchases of goods.

By the end of December 2018, state and county officials had found only 38 skimmers at gas stations. A nationwide poll, conducted by the Arizona Department of Agriculture, showed that states with aggressive inspection programs were successful in finding hidden skimmers.

In early 2019, DMS engaged with county sealers to be more proactive and by the end of FY 2018/19, that number had jumped to 163 skimmers found across the state.

There is no direct funding source for this work, but county inspectors can look for skimmers when they test fuel dispensers for accuracy. DMS staff routinely check for skimmers when they collect fuel samples. Occasionally, officials find skimmers at a location and remove them, only to find replacement skimmers installed soon after. This is no coincidence. Some criminals target the same locations because they have higher than average sales or are located near busy highways. Other targeted locations have weak security measures that allow defrauders to easily install skimmers. Once the dispenser cabinet has been opened, it takes as little as 5 seconds to install an internal skimmer.

Criminals caught with skimmers in California face only misdemeanor charges

In California, card skimming is a misdemeanor, punishable by a fine of one thousand dollars (\$1,000), or a jail term up to one year, or both [Penal Code Section 502.6(a)]. Repeat offenses do not carry a harsher punishment. In contrast, Arizona, Nevada, Oregon, Idaho, Utah, and Washington make payment card fraud a more serious felony offense to further deter this kind of crime.

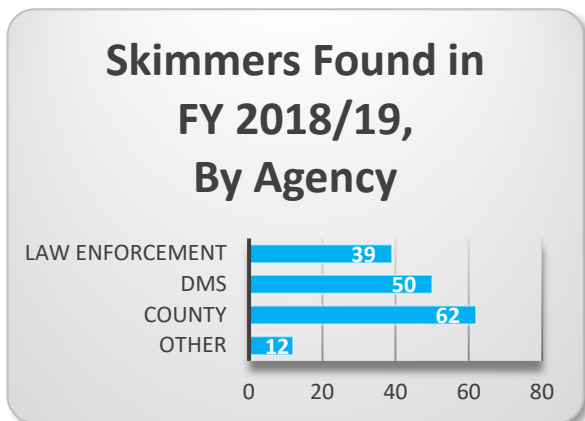


Figure 3: FY 2018/19 number of skimmers found by agency

The state map below shows locations where one or more skimmers were found and removed.

Click on the link below to view DMS' real-time, interactive skimmer map.

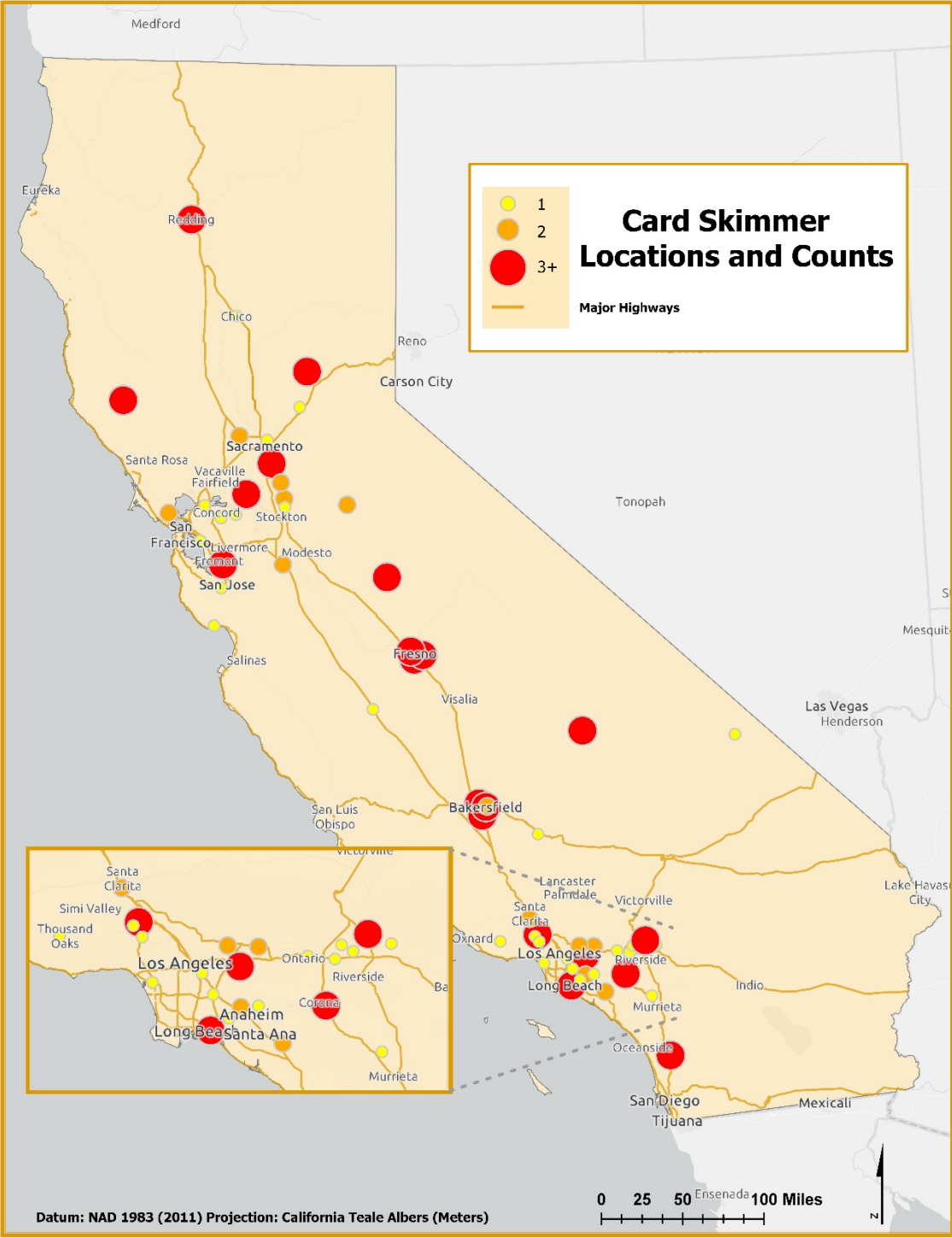
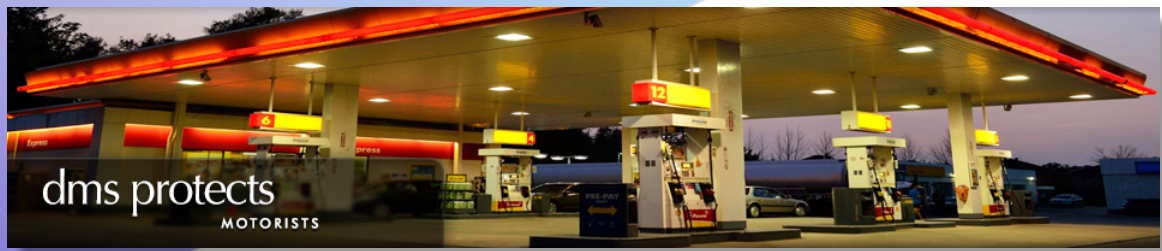


Figure 4: FY 2018/19 number of skimmers found at each location

Source: <https://gis2.cdfa.ca.gov/arcgis/apps/webappviewer/index.html?id=bebfe3fdf2d54e208a26a8e017cc7323>



Fuels and Lubricants

Every day, 50 million gallons of fuel are sold at retail in California. In FY 2018/19, the annual total sales of gasoline and diesel topped 18 billion gallons. Motorists expect to receive the proper grade and quality of fuel they are paying for.

Understandably, DMS' Fuels, Lubricants, and Automotive Products Program (FLAPP) focuses on protecting motorists purchasing fuels and other products for their vehicles. FLAPP's enforcement of the laws in Division 5 of the BPC also creates equal opportunity for service stations to compete for market share.



Photo 12: State official collecting a diesel fuel sample

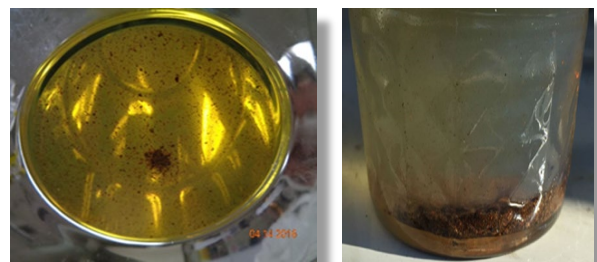
Samples of fuels and automotive products are purchased by state and county officials, either openly or undercover. Service stations, quick lube and

automotive repair shops, and retail businesses are all subject to sampling. Samples include fuels in liquid and gaseous form, prepackaged products, and bulk products.

Samples are taken to one of two DMS fuel quality laboratories (Sacramento or Anaheim) for quality testing using procedures developed by ASTM International and SAE International.



Photos 13 and 14: Compliant gasoline on left. Adulterated gasoline on right



Photos 15 and 16: No. 2 diesel fuel contaminated with sediment

DMS and county staff also routinely inspect service stations to make sure the prices on street signs and dispensers match, that signs offering discounts and other advertising are not confusing or misleading, and that the equipment dispensing air and water is in good working order.

In FY 2018/19, DMS investigated 526 complaints from motorists who did not receive free air and water at a service station.

California law requires a service station to provide free air and water for automotive purposes to its customers who purchase motor vehicle fuel

Table 2 shows the variety and number of automotive products sampled in FY 2018/19, and their compliance rates. For more information on compliance rates please contact CDFA.

Table 2: Fuels, Lubricants, and Automotive Products Sampled and Tested

Product	Number of Samples	Compliance Rate (%)
Gasoline	1,044	97
Diesel	742	93
Biodiesel (B20)	25	60
E85	6	100
Hydrogen	136	100
Kerosene	0	N/A
Motor Oil	250	96
Gear Oil	11	91
Transmission Fluid (TF)	148	62
Diesel Exhaust Fluid (DEF)	33	100
Brake Fluid	11	100
Engine Coolant	18	50

DMS tracks compliance data to guide its inspection activity in the future. More attention can be given to products and gas stations that have lower than expected compliance rates.

In cases when a product does not meet required specifications, DMS requires the store owner/operator to take it off sale until the violation is corrected. If the product is sold in bulk, the entire tank, container, or batch is removed from sale (“red tagged”)

until the product is retested in the laboratory and released by a weights and measures official.

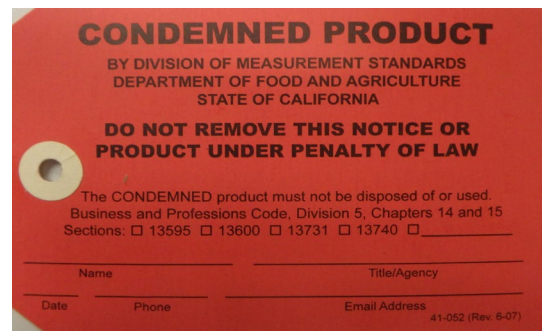


Photo 17: Red tag used for condemned products



Alternative Fuels

A fast-growing subset of FLAPP has recently emerged to address the quality, method of sale, and advertising of alternative fuels.

Roughly forty percent (40%) of California's greenhouse gas (GHG) emissions come from the transportation sector. For this reason, California has the nation's most aggressive short- and long-term goals for improving air quality, reducing petroleum dependence, and lowering vehicular emissions of GHG.

In support of these critical environmental efforts, FLAPP has expanded to include low carbon and zero-emission motor vehicle fuels, including hydrogen, biodiesel, renewable diesel, E85, renewable natural gas, and electricity.

Hydrogen

California leads the nation as the first state to establish commercial requirements for hydrogen sold as a motor vehicle fuel and is the only state with a network of retail hydrogen fuel stations. Hydrogen fuel differs from traditional motor vehicle fuels in that it is a gaseous fuel and must be sold by mass (kilograms) and not by liquid volume (gallons).



Photo 18: Hydrogen fuel dispenser showing price per kilogram

DMS has equipped its Anaheim and Sacramento laboratories with special instruments to test hydrogen fuel quality in accordance with SAE International J2719 specifications.



Photo 19: Hydrogen fuel cell vehicle ready for a fill-up
Source:

<https://www.greencarreports.com/news/1123449-hydrogen-supply-pinch-affects-san-francisco-fuel-cell-drivers>

In FY 2018/19, 136 hydrogen samples were drawn from 40 hydrogen fueling stations open to the public.

Every analyzed hydrogen sample was compliant with SAE requirements.

This success is important to the nascent hydrogen industry. Station owners must have confidence they are receiving and selling high quality fuel. Vehicle and dispenser manufacturers need a reliable marketplace to continue investing in new, expensive technology and infrastructure.

Electricity

The California Public Utilities Code, Division 1, section 216 (i) exempts a person or company as a public utility if they sell electricity to refuel light-duty electric vehicles (EV). Assembly Bill 808 (Ridley-Thomas, Chapter 591, Statutes of 2015) defined electricity as a motor vehicle fuel and established weights and measures oversight of this zero-emission fuel.

As with hydrogen fuel, Californians are early adopters of EVs and this new fuel type. The U.S. Department of Energy's Alternative Fuels Data Center Station Locator reported 6,860 public AC charging stations and 1,031 public DC charging stations in California at the end of 2018, the highest in the nation. According to a [press release](#) by the California Air Resources Board, electric and plug-in hybrid electric cars accounted for 7.8 percent (7.8%) of all new car sales in California in FY 2018/19.

While electricity does not have a quality component like most fuels, it does require accurate measurement and transparent pricing to instill consumer confidence.

However, in FY 2018/19 there is not yet consistency in pricing. Depending on the location, EV drivers may be charged by time (hours, minutes) or energy (kilowatt-hours). In some cases, extra charges like

parking and connection fees are also applied.

Without a consistent method of sale, EV drivers are unable to compare prices at competing charging stations. Without type evaluation and routine accuracy testing of charging stations, EV drivers are not guaranteed to receive the correct amount of energy.



Photo 20: Electric vehicle being refueled

During FY 2018/19, CDFA began the official rulemaking process to adopt the national model regulations approved by the National Conference on Weights and Measures (NCWM). DMS also worked with charging station manufacturers on device test procedures that county sealers will apply when California's regulation becomes enforceable on January 1, 2021.

These activities, when completed, will eventually harmonize California's EV refueling infrastructure and will level the playing field for all businesses selling electricity as a motor vehicle fuel.



Weighmasters

A "weighmaster" is an individual or business licensed by DMS to certify that the weight or measurement of a commodity is accurate. Weighmasters fill a critical role, especially in agriculture. Fruits, vegetables, and other farm commodities are weighed or measured multiple times as they move from the grower to the processor, then on through the distribution chain to the retailer. Often, neither the seller nor the buyer is present to witness the commodity being weighed.



Photo 21: Weighmaster certifying the net weight of transported commodity

The 6,153 licensed weighmaster businesses and their 47,297 employees (deputy weighmasters) work in a variety of business types, e.g., wineries, cement plants, scrap metal yards, dairy co-ops, moving and storage companies, livestock dealers, quarries, and feed mills.

DMS' oversight of weighmasters includes auditing company weighmaster certificates and other records, verification of proper weighing procedures, reweighing of vehicles and containers to confirm accurate net weight statements, and undercover test sales.

Cannabis Weighmasters

Accurate measurements are essential to the success of the budding cannabis industry. Due to the high dollar value of the product, small amounts diverted (or illegally grown product inserted) during processing and distribution can significantly impact profit margins.



Photo 22: Hanging scale used to weigh cannabis
Source: <https://intelligentwt.com/product/ahs-ntep-series-hanging-scale/>

In January 2019, the CalCannabis Division within CDFA and the California Department of Public Health (CDPH) adopted regulations requiring cannabis cultivators and distributors to use certified scales and become licensed weighmasters. By June 2019, DMS had licensed 1,684 cannabis weighmasters.

Agreements with CalRecycle

Since 2015, DMS' Weighmaster Program has had an interagency agreement (IAA) with the California Department of Resources Recycling and Recovery's (CalRecycle) Covered Electronic Waste Program to help improve compliance with electronic waste recycling requirements. Payments to e-waste collectors and/or recyclers are based on weight and count; it is vital that these quantities are summed and recorded accurately. In FY 2018/19

DMS staff inspected 327 locations and issued 26 Notice of Violations (NOVs).

In 2018, DMS signed an additional IAA with CalRecycle to assist with their Beverage Container Recycling Program. Consumers receive CRV refunds when they redeem empty beverage containers at a Recycling Center. The recycling centers then sell these products to Certified Processors, who package them into large bales. They receive payment from CalRecycle for the baled materials. CalRecycle audits Certified Processors for compliance with recordkeeping, reporting, and operational requirements of this program. DMS' role is to inspect Certified Processors for compliance with CalRecycle's program requirements as well as all applicable Weighmaster Program laws and regulations. In FY 2018/19 DMS staff inspected 47 locations and issued 159 NOVs.



Photo 23: Individual aluminum cans collected at a Recycling Center (not required to be a weighmaster)



Photo 24: Bales of plastic bottles at a Certified Processor (required to be a weighmaster)



Quantity Control

For most consumers, the only visual evidence of weights and measures oversight is the official seal placed on a grocery scale or gas dispenser. However, far more weights and measures oversight is conducted without public awareness. Packaged goods are inspected by county officials for compliance with labeling requirements and accurate net content statements. For example, the net weight statement on a box of cereal must be the weight of edible product not including the box or inner plastic liner.



Photo 25: Produce sold by net weight

Stores use scanning systems at the checkout registers to identify the items being purchased and to look up the prices in their database. The prices posted or advertised must agree with what the customer is ultimately charged. From time to time, consumers have received a short

measure package or have been overcharged. To any single consumer, the harm may appear minor. However, for the business, small errors can add up and create an unfair pricing advantage over competing businesses. See Table 8 in Appendix C for a summary of statewide inspections.



Photo 26: Propane sold by net weight

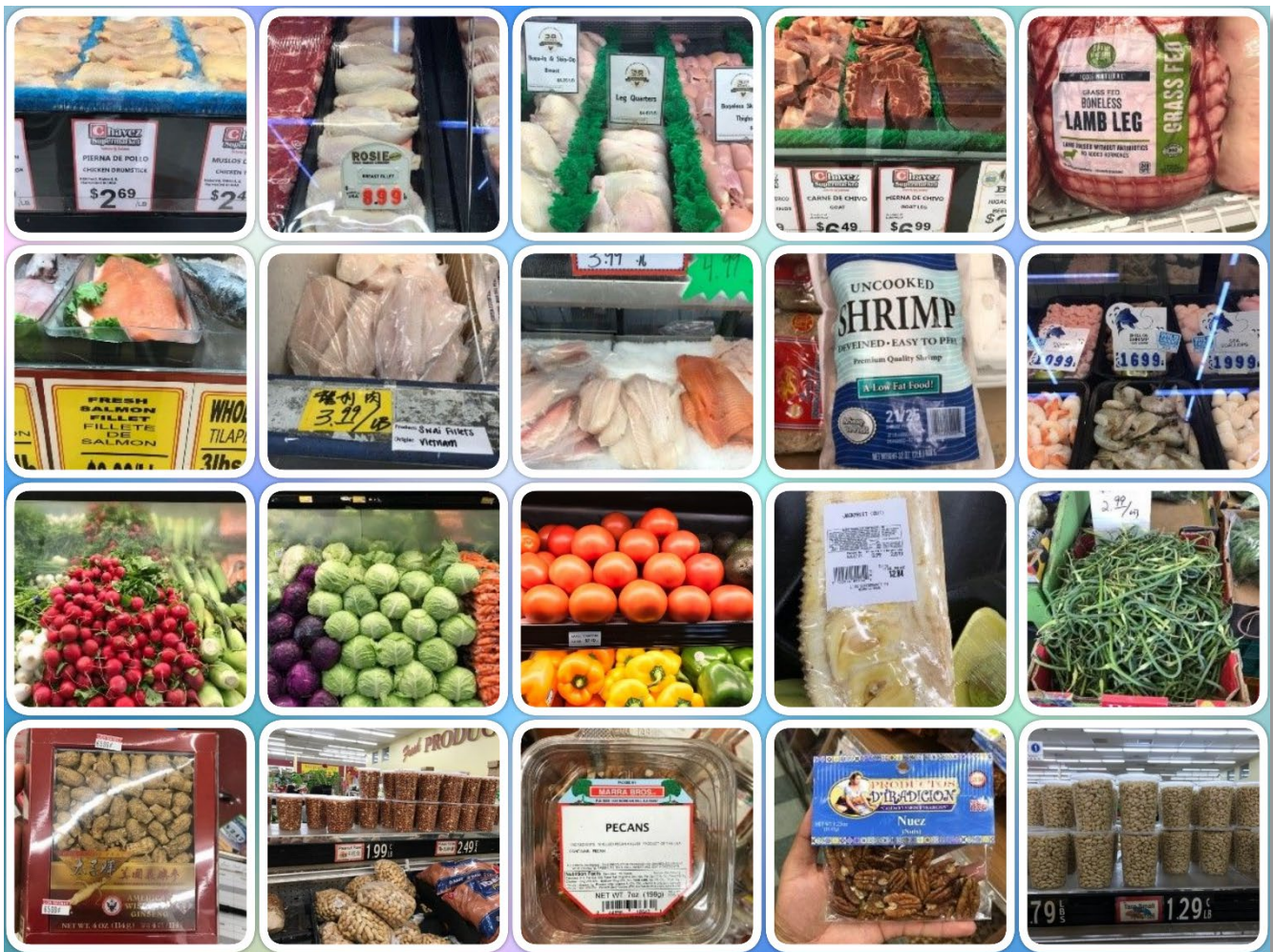
DMS currently does not have an active Quantity Control (QC) Program. General Fund shortfalls in 2011 eliminated state program funding, but several counties self-fund and still have active QC inspection programs. County sealers can work with their local District Attorney to stop companies that misrepresent their products, have false or deceptive advertising, or create unfair business competition.

Country of Origin Labeling

Country of Origin Labeling (COOL) is a federal consumer labeling law administered by the United States Department of Food and Agriculture, Agricultural Marketing Service (USDA/AMS). Grocery stores must notify shoppers of the country of origin of certain goods, e.g., the muscle cuts and ground meat of lamb, chicken, and goat; wild-

caught and farm-raised fish and shellfish; fruits and vegetables; peanuts, pecans, macadamia nuts, and ginseng. Fish markets, butcher shops, restaurants and other food service establishments, e.g., cafeterias, lunchrooms, and institutions are exempt from COOL requirements.

USDA/AMS contracts with DMS to audit retailer compliance. In FY 2018/19, DMS staff completed 386 audit reviews of stores throughout the state, and an average of 347 commodities were inspected at each location.



Photos 27-46: These common commodities are a representation of the types of items required to comply with the COOL Program and are not exhaustive.

Financial Statement

Table 3: FY 2018/19 DMS and County Offices of Weights and Measures Financial Data

DMS REVENUE	Budgeted	Actual
Federal (<i>United States Department of Agriculture</i>) ¹	\$ 292,800	\$ 184,522
CDFA (<i>General Fund</i>) ²	\$ 459,541	\$ 459,541
Industry (<i>Fee-based Funds</i>) ³	\$ 8,699,965	\$ 7,806,132
Other ⁴	\$ 1,508,701	\$ 1,508,701
Interagency Agreements (<i>CalRecycle</i>) ⁵	\$ 580,352	\$ 288,179
TOTAL DMS REVENUE	\$ 11,541,359	\$ 10,247,075
DMS EXPENDITURES	Budgeted	Actual
Personnel Services ⁴	\$ 5,865,432	\$ 4,501,927
Operating Expenses ⁴	\$ 5,629,477	\$ 3,455,650
County Payments ⁶	\$ 715,695	\$ 653,065
TOTAL DMS EXPENDITURES	\$ 12,210,604	\$ 8,610,642
COUNTY REVENUE		Actual
All County Offices Weights and Measures		\$ 34,550,286
All County Reimbursements		\$ 648,574
TOTAL COUNTY REVENUE		\$ 35,198,860
COUNTY EXPENDITURES		Actual
All County Offices Weights and Measures		\$ 52,768,916

¹ COOL Program; ² Metrology Program; ³ Administration, CTEP, RSA, Devices, Weighmaster, and FLAPP;

⁴ Includes AB 32 Cost of Implementation Fund for Alternative Fuels Quality and Oversight; ⁵ Covered Electronic Waste and CRV; ⁶ Cooperative Agreements to Inspect Fueling Stations and Weighmaster Locations.

Appendices

Appendix A – FY 2018/19 Annual Summary

Table 4: FY 2018/19 Annual Report for Weights and Measures – Summary

	Total Expenditures¹	Total Hours¹	Hourly Cost¹	Cost Per Capita^{1,2}
County	\$52,768,916	560,959	\$94.07	\$1.32
State	\$6,759,048	63,232	\$106.89	\$0.17
Total	\$59,527,964	624,191	\$95.37	\$1.49

Percent of Expenditures (by Program)¹

	Reg. Service Agency	Devices	Quantity Control	Weighmaster	Petroleum	Metrology
County	8.0%	62.1%	24.6%	1.3%	3.3%	0.7%
State	0.4%	12.3%	0.4%	26.0%	54.3%	6.7%
Total	7.1%	56.4%	21.9%	4.1%	9.1%	1.4%

Percent of Hours (by Program)¹

	Reg. Service Agency	Devices	Quantity Control	Weighmaster	Petroleum	Metrology
County	8.2%	60.5%	25.8%	1.4%	3.3%	0.8%
State	0.3%	13.5%	0.3%	25.0%	53.9%	6.9%
Total	7.4%	55.7%	23.2%	3.8%	8.4%	1.5%

¹ This data is compiled from the County Annual Report and does not include revenue and expenses of DMS' administration of the Alternative Fuels Quality and Oversight Program and the COOL Program for FY 2018/19. Table 3 reflects DMS' revenue and expenditures of that program.

² FY 2018/19 population data obtained from the Department of Finance

Appendix B – FY 2018/19 Measuring and Weighing Devices

Table 5: FY 2018/19 Commercial Measuring Devices in California (By County)

2018/19	Measuring Devices in Each County FY 2018/19 measuring devices registered, by type of device. Includes count per county and statewide total.																				Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	CNG Meters	Electric Submeters	EVSE Meter	Fabric, Cordage, Wire	Grease & Lube Meters	Hydrogen Meter	LNG Meter	Liquefied Gas Meters	MIK Tanks (Liquid)	Odometers	Fuel Meter	Retail Meters	Retail Water Meters	Tanks (Liquid Test)	Taximeters	Vapor Submeters	Vehicle Meters	Water Submeters	Wholesale Meters	Misc. Measuring Devices	
Alameda	4	8,982	93	93	233	3	54	54			10,369	146	336	336	3,489	118	19,926	12		43,805	
Amador		357	15	15			33	33			384	8	3	3	1,381		449			2,630	
Butte	2	1,874	20	19			60	60			1,983	2	28	28	1,577	25	17,566			7,389	
Calaveras		735	9	9			37	37			485	11			2,458	8	391			4,144	
Colusa		332					10	10			489	2	61		92	16				1,002	
Contra Costa	2	6,817	72	72	2	2	37	115			7,875	42	116	168	3,773	112	7,272	200		26,612	
Del Norte		611	4	4			10	10			288				83	3				979	
El Dorado/Alpine		1,880	1	1			96	96			1,901	12	14	55	4,094	15	1,392	3		9,463	
Fresno	6	3,758	62	62	1	1	141	141	129	103	8,684	1	334	51	4,729	127	1,606	67		19,799	
Glenn		107	3	3			13	13	2		491	9	11	491	143	4	38			821	
Humboldt		2,547	26	26			70	70		15	1,678	13	13	26	2,284	83	782			7,524	
Imperial	3	5,172	40	40			50	50			2,537	133				62			11	8,008	
Inyo/Mono		1,530	1	1			57	57			937	4			1,500	18	26			4,073	
Kern	4	5,538	54	54			182	182		159	10,293	91	404	80	3,993	135	4,454	25		26,003	
Kings	2	513	10	10			21	21	225	17	1,535	13	93	16	969	10	792	7	10	4,220	
Lake		1,090					43	43			745				2,514	13				4,431	
Lassen		6	1	1			23	23			327			1		10				411	
Los Angeles	139	54,171	525	525		31	773	773		1,583	58,834	2,719	3,665	39,215	468	116,537	501	1,640		280,808	
Madera	4	603	21	21			64	64			1,753	13	44	9	1,801	19	234			4,576	
Marin	1	3,915	65	23		1	22	22	2		1,812	17	17	73	739	3	62			6,735	
Mariposa		111	4	4			14	14			271	7	2		111	10				547	
Mendocino		649	24	24			95	95			1,193	6	6	11	1,417	20	298			3,714	
Merced	4	677	20	20		10	59	59	402	52	2,814	46	110	16	1,180	45	465	11		5,903	
Modoc											182					8				180	
Monterey		2,729	44	44			83	83			3,732	3	223	161	2,709	88	2,569			12,341	
Napa	10	2,653	11	11			39	39			998	27	27	18	2,596	19	4,315		10	10,696	
Nevada	2	1,368	13	13			67	67			833	8	8	10	1,777	18	1,008	2		5,106	
Orange	50	31,247	157	157			142	142		422	19,453	563	478	39,415	114	73,961	162			160,166	
Piace		2,708	34	34			75	75			3,796	1	27	2,761	23	4,018				13,446	
Plumas/Sierra		869	10	10			48	48			340				211					1,492	
Riverside	50	32,444	158	158		2	283	283		245	17,751	26	807	163	25,614	194	48,629	44		126,410	
Sacramento	8	7,781	60	60		4	158	158			10,892	4	164	281	8,340	55	11,242	39		39,028	
San Benito		378	3	3			20	20			386	1	25		238	10	324			1,385	
San Bernardino	63	17,918	117	117		5	288	288		376	19,309	44	700	108	18,458	240	42,126	196		99,948	
San Diego	34	44,706	204	204	3		381	381		1,100	20,671	42	1,389	1,042	34,946	266	110,432	122		215,339	
San Francisco		2,657	14	14		6	6	6			2,198		16	1,507	5	2,936				9,353	
San Joaquin	8	5,431	55	55		2	101	101		95	6,693	92	126	21	3,784	154	3,089	175		19,826	
San Luis Obispo	4	4,638	37	37			62	62			2,541	1	114	23	3,751	46	4,507	2		15,726	
San Mateo	16	5,416	27	27		2	39	39			4,740	3	70	166	2,271	70	13,161	5		25,923	
Santa Barbara	6	5,750	37	37			56	56		102	2,938	197	402	121	5,001	202	55,191	148		20,071	
Santa Clara	14	18,968	101	101			116	116		4	11,470	3	402	675	17,322	202	55,191	148		104,904	
Santa Cruz	4	4,006	31	31			44	44			1,860	77	42	42	3,785	13	4,996			14,854	
Shasta		2,305	38	38			96	96			2,886		12	18	2,201	57	1,252	19		8,887	
Siskiyou		431	9	9			38	38			743			2	985	32				2,240	
Solano	1	4,244	38	38			53	53		103	4,243	55	55	55	2,472	3	4,047	22		15,346	
Sonoma	2	7,872	106	106			106	106			3,693	2	85	70	7,645	33	9,150	63		28,980	
Stanislaus		706	40	40			75	75		100	5,033	157	27	27	2,346	126	3,083	5		11,738	
Sutter		379	12	12			24	24			943	3	26	2	275	6	117			1,787	
Tehama		1,194	11	11			35	35			1,078	9			999	5	360			3,691	
Trinity		142	3	3			25	25			122				345					637	
Tulare	10	1,448	57	57			113	113	574		5,353	10	284	10	2,997	96	917			11,879	
Tuolumne		863	10	10			57	57			537	1	6		5,376	16	312			7,178	
Ventura	4	11,086	46	46		1	98	98		79	5,410	279	60	42	9,840	43	16,350	94		43,372	
Yolo	2	1,646	25	25			41	41		15	2,265	4	60	2	1,497	43	2,074			7,677	
Yuba	3	475	6	6			39	39			841	3	51		365	19	190			1,992	
Total	458	326,433	97	2,494	246	63	54	4,850	1,334	4,570	281,808	482	10,254	0	9,582	281,879	3,323	582,570	2,072	2,626	1,515,119

Table 6: FY 2018/19 Commercial Weighing Devices in California (By County)

2018/19	21 Class II	22 Computing	23 Counter	24 Crane	25 Dormant/Port. Platform	26 Hopper & Tank	27 Hanging	28 Livestock & Animal	29 Monorail & Meat	30 Prescription/ Jewelers	31 Railway	32 Vehicle	33 Misc. Weighing Devices	Total Weighing Devices
Alameda		3,062	213	1	745	56	37	16	6	200	1	131		4,468
Amador		129	4		37	4	4	10	2		1	17		216
Butte	10	372	61		100	4	64	12	2	10		111	2	748
Calaveras		95	6		31		9	15		1		13	3	173
Colusa	3	32	23		149	11	6	8				75		307
Contra Costa	1	1,950	112		262	29	16	20		38	7	95	1	2,531
Del Norte		10	65		14		18	1				11		119
El Dorado/Alpine		289	183		47	6	23	5	1	4		13		571
Fresno		2,385	237	12	533	14	108	36	8	72	3	281		3,689
Glenn		95	39		42	11	17	24	3			72	6	309
Humboldt	33	428	617		189		30	42	2	15		55	91	1,487
Imperial	1	459	39		155	16	18	22	2	15	2	137		866
Inyo/Mono		69	42		16	11	7	44	1	3		24		217
Kern	6	1,668	95		294	5	23	54	2	148	7	274	8	2,584
Kings		249	205		173	14	14	17	4		2	106	38	822
Lake		103	7		7		2	1				17	10	154
Lassen		20	28		12	5	2	24	1		1	15		108
Los Angeles	179	19,059	1,112	6	6,896	20	182	6	15	1,934	9	617		30,029
Madera		254	19		89	4	18	29	3	18		78		512
Marin		775	43		92	2	33	15	12			14	10	996
Mariposa		43	6		8	1	10	23				1	11	103
Mendocino	4	484	366		61		53	7		31		38	13	1,064
Merced	3	682	42	1	123	25	93	49	8	6		172		1,204
Modoc		20	8		8	5			5	1		16		55
Monterey	154	1,038	98	2	283	7	22	76	28			108	17	1,833
Napa		370	26		494	4	8	6	1	5		63	9	1,038
Nevada		211	41		11	4	11	3		7		10	13	320
Nevada		5,972	619		909	1	26	3	2	172	1	93	1	7,799
Orange		933	121		99	4	89	12	5	15		21	5	1,304
Placer		47	37		11		11	38	1			18		164
Plumas/Sierra		4,337	450	3	778	20	45	6	3	150		176	2	5,970
Sacramento	91	2,713	303		594		48	23	2	54	1	117	39	3,985
San Benito	4	98	31		40	1	3	63	1			286	1	282
San Bernardino	25	3,531	299	12	864	15	36	6	1	314	9	266	832	6,230
San Diego		5,947	845	3	1,099	76	57	9		290	1	139	92	8,558
San Francisco	71	1,225	1,420		51	1	8			82		24	4	2,886
San Joaquin	37	1,688	388		709	60	134	24	8	69	6	290	112	3,525
San Luis Obispo	17	530	213	7	327	20	88	74	7	2		68		1,353
San Mateo		860	795		766	2	21	4		30	1	40		2,519
Santa Barbara		1,022	204	13	368	11	81	40		99		66	4	1,908
Santa Clara		1,800	2,231	2	795	60	118	14		101		106	55	5,282
Santa Cruz	95	634	78	3	70	4	24	3	3			28		942
Shasta		419	24		91	1	25	32	3	17		52		666
Siskiyou		132	42		20	12	8	67	7			43	12	343
Solano		862	106	4	91	6	5	20	3		1	59		1,157
Sonoma		1,406	302	144	481	32	76	16	7	123		111		2,708
Stanislaus		1,375	259		330	42	86	48	7	37	5	217	11	2,417
Sutter		223	65		137	1	3	3	2	6		71	2	513
Tehama		156	23		63		17	29	6	22		40		356
Trinity		32						4						36
Tulare		1,024	161		270	10	99	62	3	31	6	244		1,910
Tuolumne		158	27		5	1	6	10		9		18		234
Ventura	1	1,986	369	9	340	9	45	3		42		65		2,869
Yolo		441	101	1	212	11	12	14	4	96	3	87	178	1,160
Yuba		154	13		64		9	10	2	2		61		315
Total	735	74,036	13,283	289	20,474	657	2,008	1,196	143	4,298	70	5,143	1,582	123,914

Appendix C – FY 2018/19 Inspection and Enforcement Activities

Table 7: County Inspection and Enforcement Activities – Summary

Program Activities	Service Agency	Devices	Quality Control	Weighmaster	Petroleum
Locations Visited	12,014	65,723	30,855	1,301	9,701
Inspections	79,246	390,002	843,175	1,328	10,385
Complaints - Consumer	222	3,237	2,366	83	425
Complaints - Other	1	51	17	1	4
Notices of Violation	673	9,318	5,930	128	1,937
Civil Administrative Actions	10	42	1,839	7	4
Civil Administrative Hearings	1	28	34	0	5
Civil Administrative Penalties	\$ 3,843	\$ 14,878	\$558,871	\$ 3,000	\$ 1,102
Citations - Infraction	0	0	0	0	0
Citations - Misdemeanor	1	6	0	0	0
Criminal Complaints Filed	0	11	171	0	0
Civil Complaints Filed	0	12	1	0	3
Convictions / Judgements	0	0	93	0	0
Penalties Assessed – Infraction and Criminal Fines	\$ 0	\$ 0	\$ 17,749	\$ 0	\$ 0
Penalties Assessed – Civil	\$ 250	\$ 0	\$ 5,000	\$ 0	\$ 0
Investigative Cost Recovery	\$ 0	\$ 1,410	\$111,136	\$ 0	\$ 5,311

Table 8: FY 2018/19 County Inspections – Quantity Control

Package Inspection	Number
Lots Accepted	605
Lots Rejected	686
Packages Rejected	196,303
Packages Accepted	11,331
Packages Sampled	11,089

Price Verification	Number
Packages Scanned / PLU	450,108
Overcharges	7,679
Undercharges	3,553

Audit Inspection	Number
Lots Inspected	63,845
Packages Sampled	163,305

Test Purchases / Sales	Number
Purchases / Sales Made	11,944
Overcharges	1,356
Undercharges	265

Labeling Actions	Number
Lots Rejected	1,240
Packages Rejected	10,078

Table 9: FY 2018/19 County Inspections – Fueling Stations

Fueling Stations	Number
Initial Inspections	7,727
Other Inspections	2,658
Gallons Rejected – Quality	35,159
Gallons Rejected – Labeling	53

Table 10: FY 2018/19 County Inspections - Weighmaster

Weighmaster	Number
Audits	864
Tares Verified	94
Reweights	7
Test Scales	363

Bulk Commodities Verified	Number
Inspections	108

