

MJB&A Issue Brief ■ April 25, 2017

California's Light-Duty Vehicle Emissions Standards: The Clean Air Act Waiver, Standards History, and Current Status

Under the Clean Air Act, California is permitted to set its own vehicle emissions standards so long as it receives a waiver from the Environmental Protection Agency. California has done so regularly since the 1960s. However, it is unclear if the Trump Administration will continue to grant future waivers or review prior ones. This issue brief provides a background of the Clean Air Act vehicle emissions waiver and the recent California standards to which it has applied, including a waiver application denied under President Bush when California first attempted to establish vehicle emissions standards for greenhouse gases. It then describes recent developments in federal vehicle emissions standards and explores possible implications for California's program.

Clean Air Act and the Vehicle Emissions Waiver

When Congress passed the 1963 Clean Air Act, it authorized the first federal pollution control. In 1970, Congress amended the Act to establish the first comprehensive emissions standards for new automobiles for pollutants that could adversely affect human health. At that time, only California had established comparable state-level vehicle emissions standards, passed in 1967 through the Mulford-Carrell Act. In the hearings on Clean Air Act development, Senators from states across the country lauded California's leadership in this field. Thus, though Section 209 of the Clean Air Act barred any "State or any political division thereof" from implementing emission standards for new vehicles, it also allowed "any state which has adopted standards...prior to March 30, 1966"—i.e., California—to submit an application for a waiver from this restriction.

Section 209(b) explains that this waiver will only be granted if the state standards are, in aggregate, at least as protective of public health and welfare as the federal standards. It also states that no waiver will be granted if the administrator of the Environmental Protection Agency (EPA) finds that any of following three conditions are met:

- The state was arbitrary and capricious in its finding that its standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards;
- The state does not need such standards to meet compelling and extraordinary conditions; or
- such standards and accompanying enforcement procedures are not consistent with Section 202(a) of the Clean Air Act, which lay out the EPA requirements for federal vehicle emissions

When California files an application for waiver, EPA publishes notice for public hearing and written comment in the Federal Register. Once the comment period expires, EPA reviews the comments and the Administrator determines whether the requirements for obtaining a waiver have been met.

While only California can apply for a waiver under Section 209, other states can choose to adopt an approved California standard under Clean Air Act Section 177. For a state to adopt and implement California standards in lieu of federal standards, it must establish identical standards to California's at least two years before they are set

to come into effect. These states, often called “Section 177 States,” are not required to seek EPA approval of this decision, though their decision to adopt California’s standards is usually discussed and justified in State Implementation Plans that address a state’s path to meeting air quality standards and that are submitted to EPA.

California first requested a waiver under the Clean Air Act to set emissions standards in December 1970. Since that date, it has submitted more than 100 applications to the EPA, either for waivers for new emission standards or for confirmation that regulatory changes fell under existing authorized waivers. The vehicle emissions standards covered under these waivers apply to a range of vehicle types, including light-, medium-, and heavy-duty vehicles, motorcycles, off road vehicles, commercial harbor craft, urban buses, mobile cargo handling equipment, and cargo ships at berth in California harbors. With very few exceptions, EPA has granted the requested waiver allowing California to set its own emission standards for these vehicles: only six times, five of which occurred before 1976, did EPA deny California’s waiver application; the sixth we discuss in more detail below.

Policy Background: California’s Low Emissions Vehicle Program and Federal Standards

The era of California’s contemporary vehicle emissions reductions began in 1990, when the California Air Resources Board (ARB) adopted the Low Emissions Vehicle (LEV) program which, among other things, set criteria pollutant emissions standards for passenger vehicles in model years 1994 through 2003. To comply with these standards, each automaker was required to calculate a “fleet” average emissions rate—an average rate of all new vehicles sold by that automaker. The fleet average for each pollutant required each year under the LEV program was lower than what was required under EPA’s new vehicle emission standards in effect for the same model years. EPA approved California’s waiver application for this program in January of 1993.¹ The LEV II regulations, passed in 1998, expanded upon this program, setting tighter fleet average emission standards for model years 2004 through 2010. LEV II also added more information on the use Zero Emissions Vehicle (ZEV) credits, which could be used by automakers to help lower their fleet emissions average. EPA approved a waiver for these standards in April 2003.² By 2007, 15 states had adopted California’s standards under Section 177 effective for vehicles sold starting in model years between 2008 through 2010.³

Federally, EPA has also established criteria pollutant emissions standards for light duty vehicles, which began with passage of the Clean Air Act in 1970. The foundation for contemporary standards were formed in 1990, when Congress amended the Clean Air Act to define federal emissions standards that took effect for model year 1996. Since that date, the standards have been updated as increasingly stringent “tiers,” though federal standards lagged behind California standards. Congress also enacted Corporate Average Fuel Economy (CAFE) standards in 1975, which aimed to improve average fleet-wide fuel economy of light duty vehicles. These standards were established and are managed by the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA), though EPA manages the testing program used to determine annual compliance. Set at less than 20 miles per gallon at their inception, these standards rose to around 27 mpg in the 1970s and stayed at this approximate level until 2012.

¹ 58 Fed. Reg. 4166. Available at <http://loc.heinonline.org/loc/Page?handle=hein.fedreg/058008&id=1&collection=journals&index=fedreg/058#116>

² 68 Fed. Reg. 19811. Available at <https://www.gpo.gov/fdsys/pkg/FR-2003-04-22/pdf/03-9910.pdf>.

³ These states were: Connecticut, Delaware, Georgia, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Texas, Vermont, Washington. See https://iaspub.epa.gov/otaqpub/display_file.jsp?docid=16888&flag=1

Vehicle Greenhouse Gas Emissions Standards: Waiver Denial and Reversal

In 2002, the California Legislature passed Assembly Bill 1493, which for the first time directed ARB to establish GHG emissions standards for passenger vehicles. These standards, often called the Pavely Standards for the Assemblywoman who sponsored their creation, were implemented in ARB regulation in 2004 as part of the revised LEV II, and were to apply to passenger vehicles and light trucks beginning with the 2009 model year. The ARB requested a waiver under Section 202 of the Clean Air Act in December 2005.⁴

Note that while the Pavely standards were the first direct vehicle GHG limits ever proposed in the U.S., the federal CAFE fuel economy standards in effect since the late 1970s were effectively defacto GHG standards applicable to all light duty vehicles sold in the U.S. (including California and other Section 177 states).

The Bush Administration EPA did not begin considering ARB's request until 2007. In spring of that year, the Supreme Court ruled in *Massachusetts v. EPA* that GHGs are air pollutants under the Clean Air Act, including specifically GHG emissions from motor vehicles. Shortly thereafter, the Director of the ARB sent a formal letter to EPA Administrator Johnson reiterating that state's request for a waiver for the revised LEV II program.⁵ EPA then opened a formal administrative process that included two public hearings and a written comment period.

On March 6, 2008, EPA denied California's waiver request after determining that California did not need its GHG standards to meet "compelling and extraordinary conditions," one of the three waiver criteria. EPA did not address the other two waiver criteria.

In this denial, EPA said that this was the first "California waiver request for a fundamentally global air pollution problem."⁶ EPA identified a number of "fundamental factors" leading to air pollution problems, such as geography, local climate conditions (such as thermal inversions), and density of motor vehicles.⁷ And, importantly, EPA said it believed that "Congress had in mind the causal factors of local or regional air pollution problems, not the level of the air pollution per se," when it declared that California must show that it experiences compelling and extraordinary conditions in need of separate vehicle emissions standards. The effect of GHGs however, EPA wrote, were not defined only by these factors. Instead, GHG emissions "from California's cars do not just affect the atmosphere in California, but in fact become one part of the global pool of GHG emissions that affect the atmosphere globally and are distributed throughout the world." In total, the EPA determined that the appropriate criterion to apply was:

whether the emissions of California motor vehicles, as well as California's local climate and topography, are the fundamental causal factors for the air pollution problem of elevated concentrations of greenhouse gases, and in the alternative whether the effect in California of this global air pollution problem amounts to compelling and extraordinary conditions.

⁴ California State Motor Vehicle Pollution Control Standards - Request for Waiver of Preemption Under Clean Air Act Section 209(b) for Greenhouse Gas Emissions (Docket EPA-HQ-OAR-2006-0173). Available at <https://www.regulations.gov/docket?D=EPA-HQ-OAR-2006-0173>

⁵ Letter to Stephen L. Johnson, Administrator, USEPA from Catherine Witherspoon, Executive Officer, California Environmental Protection Agency, Air Resources Board (Docket EPA-HQ-OAR-2006-0173). Available at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2006-0173-0017>.

⁶ 74 Fed. Reg. 12159 (March 6, 2009). Available at <https://www.gpo.gov/fdsys/pkg/FR-2008-03-06/pdf/E8-4350.pdf>

⁷ 74 Fed. Reg. 12160 (March 6, 2009).

EPA determined that California did not present sufficient evidence to meet this criterion because, among other reasons, the effects of global climate change would not be extraordinarily felt in California. EPA, therefore, denied this request.

Early in 2009, at the start of the Obama administration, ARB Chairwoman Nichols and California Governor Schwarzenegger both sent letters to the administration requesting that EPA reconsider its waiver denial.⁸ Within days, President Obama signed a Presidential Memorandum directing EPA to assess whether the denial was appropriate.⁹ By February, EPA had noticed the start of its reconsideration, holding public hearings and accepting comments through spring of 2009.

EPA granted the waiver, reversing the previous administration's finding, on June 30, 2009.¹⁰ EPA Administrator Jackson first laid out an argument for why it was improper to consider the GHG emissions standards separate from the rest of California's vehicle emissions standards included in the LEV II program. The "better approach," EPA stated, was to "review California's need for its new motor vehicle emissions program as a whole to meet compelling and extraordinary conditions, and not to apply this criterion to specific standards."¹¹ Thus, EPA determined that it was inappropriate to deny the waiver request after having granted previous LEV program waivers.

Furthermore, EPA noted that Section 209 is written to limit the ability of EPA to deny a waiver. EPA must issue a waiver unless it can show that one of three criteria have been met. This interpretation, whereby the presumption of the approval of the waiver request starts in favor of California, is consistent with legislative intent, EPA explained, which was expressly to "provide the broadest possible discretion [to California] in selecting the best means to protect the health of its citizens and the public welfare."¹² It notes also that the D.C. Circuit reaffirmed California's unique position, writing that "Congress intended [California] to continue and expand its pioneering efforts at adopting and enforcing motor vehicle emission standards different from and in large measure more advanced than the corresponding federal program. In short, to act as a kind of laboratory for innovation."¹³

Therefore, EPA explained, even if the GHG emissions standards *were* to be considered separately from the rest of the LEV II program, it was the responsibility of opponents of the waiver to demonstrate that California did not need these standards to meet compelling and extraordinary conditions. These opponents, EPA noted, had failed to do so, in light of numerous impacts of climate change. It explained:

... California has identified a wide variety of impacts and potential impacts within California, which include exacerbation of tropospheric ozone, heat waves, sea level rise and salt water intrusion, an intensification of wildfires, disruption of water resources by, among other things, decreased snowpack levels, harm to high value agricultural production, harm to livestock production, and additional stresses to sensitive and

⁸ Letters from Governor Schwarzenegger to President Obama, and Commissioner Nichols to Administrator Jackson on January 21, 2009. Available at

<https://insideclimatenews.org/sites/default/files/Schwarzenegger%20and%20Nichols%20Letters.pdf>

⁹ Presidential Memorandum ("EPA Waiver"), Memorandum For the Administrator Of The Environmental Protection Agency. Available at <https://obamawhitehouse.archives.gov/the-press-office/2009/01/26/presidential-memorandum-epa-waiver>

¹⁰ 74 Fed. Reg. 32761 (July 8, 2009) <https://www.gpo.gov/fdsys/pkg/FR-2009-07-08/pdf/E9-15943.pdf>

¹¹ Id.

¹² 5H.R. Rep. No. 294, 95th Cong., 1st Sess. 301–302 (1977). See MEMA, 627 F. 2d at 1110–11

¹³ MEMA, 627 F. 2d at 1111.

endangered species and ecosystems. Opponents have not demonstrated that any other state, group of states, or area within the United States would face a similar or wider range of vulnerabilities and risks. In addition, California has submitted information that climate change can impact ozone levels in California due to temperature exacerbation effects. Although other areas of the country are also projected to experience increases in temperatures which may also exacerbate local ozone levels, opponents of the waiver have not demonstrated that California's ozone levels should not be considered compelling and extraordinary conditions.¹⁴

With this waiver approved, California proceeded with implementing the amended LEV II standards, including the Pavely Standards for GHG emissions. As of 2012, 13 states and the District of Columbia, comprising approximately 40 percent of the light-duty vehicle market, had adopted California's standards.¹⁵

Current Regulations: Federal GHG Emissions Standards and the California Advanced Clean Cars Program

The 2007 U.S. Supreme Court ruling, *Massachusetts v. EPA*, set in motion a sequence of events that introduced profound changes to the regulation of motor vehicle emissions standards.

In response to the Court's ruling, EPA undertook an extensive scientific review of the impact of these gases on human health and the environment. In late 2009, EPA issued its "Endangerment Finding", which stated that projected concentrations of six GHGs—carbon dioxide, methane, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations. In a separate but related ruling, the Administrator found that the combined emissions of these gases from new motor vehicles contributes to the greenhouse gas pollution, which threatens public health and welfare. These rulings formed the basis for the approval of the first ever explicit federal vehicle GHG emissions standards.

Importantly, these new federal GHG emissions standards were established through the process of a Joint Proposal in 2009 between EPA and NHTSA. In order to avoid having two sets of standards across the country (federal and California), in May 2009, President Obama had reached an agreement with the auto industry, EPA, NHTSA, and California that would create harmonized CAFE fuel economy and GHG standards for cars and light-duty vehicles from 2012 to 2016 at the federal level, with California agreeing to adopt the same standards, as explained further below. These regulations were proposed in September 2009, and, subsequent to the issuance of the Endangerment Finding, the standards were finalized in April 2010, applying starting in model year 2016. In 2012, EPA and NHTSA also finalized rules to set the first GHG emission and fuel efficiency standards for medium- and heavy-duty engines and vehicles.

In 2012, the California ARB worked in coordination with EPA and the NHTSA to develop the Advanced Clean Cars Program. This combined four separate regulations into one program: amended LEV III standards for criteria pollutants emissions, the Pavely GHG emissions standards, ZEV regulations that established targets for total ZEVs purchased in state,¹⁶ and requirements for electric and hydrogen transportation infrastructure improvements

¹⁴ 74 Fed. Reg. 32675 (July 8, 2009)

¹⁵ 77 Fed. Reg. 62637 (October 15, 2012). Available at <https://www.gpo.gov/fdsys/pkg/FR-2012-10-15/pdf/2012-21972.pdf>.

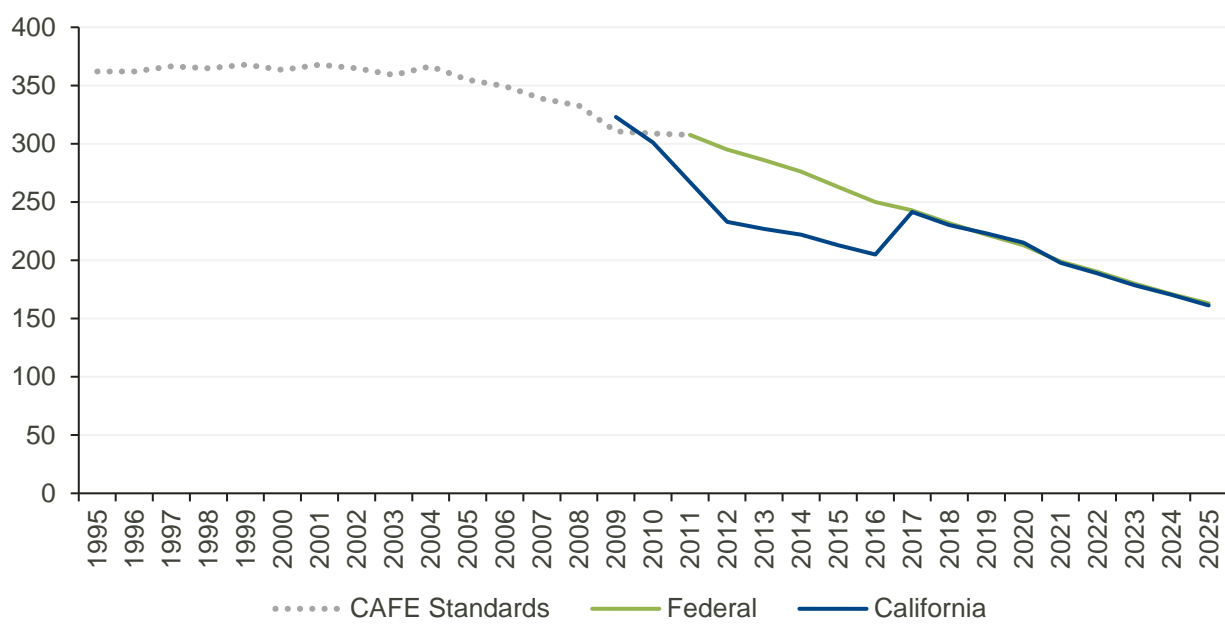
¹⁶ Note that these ZEV standards are separate from the "ZEV Memorandum of Understanding (MOU)," an agreement among eight states signed in 2013 committing to coordinated action to jointly reach 3.3 million ZEVs on road by 2025. While the ZEV standards under the Advanced Clean Cars program impose regulatory requirements on automakers that sell

(the latter is not subject to federal preemption and does not require a waiver under Section 209). Advanced Clean Cars sets a coordinated set of requirements across all four regulations for model years 2015 through 2025.

ARB submitted a request to EPA for a waiver for the Advanced Clean Cars regulation in June 2012. After public hearing and comment through fall of 2012, EPA approved this waiver request on January 9, 2013.¹⁷ This waiver remains effective for the standards established through 2025. Including California, 13 states and the District of Columbia continue to utilize California’s standards.

It is important to note that while previous California criteria pollutant and GHG emissions standards were significantly more stringent than federal standards, the 2010 federal standards and California’s ZEV III started a process of convergence between the two programs (see Figure 1). Starting in 2025, both programs set similar fleetwide GHG targets equivalent to 36 miles per gallon in real-world driving conditions (54.5 miles per gallon in testing conditions). This convergence was of critical interest to automakers, who had long argued that navigating differing standards state by state increased costs and complicated vehicle development.

Figure 1 Historic Fleet Average Vehicle GHG Emissions Standards (g CO₂ per mile)



When the ARB adopted the Advanced Clean Cars Program, it committed to a comprehensive “Midterm Review” of the emissions standards (for both criteria pollutants and GHG) and the ZEV regulation. Similarly, EPA was required to conduct a Midterm Evaluation of federal light-duty vehicle GHG standards. Both program reviews were set to be conducted in 2016 to review standards for model years 2022 and beyond. Through these review processes, ARB and EPA both determined that their respective standards remain appropriate and that no rulemaking to modify regulations is required. EPA published its Final Determination on January 12, 2017, and

vehicles into California and Section 177 states, the ZEV MOU identifies joint cooperative actions the signatory states will undertake, and additional actions that individual jurisdictions are considering, to build a robust market for ZEVs. For more information on the ZEV MOU see <https://www.zevstates.us/>.

¹⁷ 78 Fed. Reg. 2112 (January 9, 2013). Available at <https://www.gpo.gov/fdsys/pkg/FR-2013-01-09/pdf/2013-00181.pdf>

ARB released its Advanced Clean Cars Midterm Review Report on January 18, 2017. In its determination, EPA stated that the automotive industry is well positioned to meet the standards at lower costs than previously estimated. The determination also noted that automakers outperformed the standards for the first four years of the program and manufacturers are adopting fuel efficient technologies while vehicle sales have increased for seven consecutive years. However, both ARB and the federal government (the NHTSA) must take rulemaking action to finalize the targets for 2022 and beyond.

Trump Administration: New Uncertainty Regarding California’s Waiver

The Trump Administration began signaling in early March its intent to begin rolling back the federal vehicle GHG emission standards.¹⁸ On March 15, 2017, the Administration officially announced its intention to reconsider the Midterm Evaluation of the GHG standards for model years 2022-2025. EPA intends to make a new Final Determination regarding the appropriateness of the standards no later than April 1, 2018. It is expected that in its new Determination, EPA and NHTSA will conclude that the standards for 2022 to 2025 should be less stringent than current standards.

This announcement did not make mention of the appropriateness of California’s current waiver, which remains in effect for existing standards through 2025. However, Trump Administration officials have previously questioned whether this waiver would be allowed to stand.¹⁹ Furthermore, there could be increasing pressure from automakers to lower or rollback California’s standards in order to avoid recreating a divergence of standards between states adopting California standards and those adopting federal standards.

California policymakers and other states that have adopted its vehicle emission standards immediately responded. California Governor Jerry Brown, Senator Kamala Harris, and a group of state attorneys general released statements condemning the order.²⁰ In addition, on March 22, the environmental agency heads of Connecticut, Delaware, Maryland, Massachusetts, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Washington and the District of Columbia submitted a letter to EPA Administrator Pruitt supporting the MY 2022-2025 Light Duty Vehicle Greenhouse Gas Emission Standards and the California waiver. In this letter, state policymakers noted

Legal Challenges

In addition, the midterm review of the emissions standards is the subject of *Alliance of Automobile Manufacturers v. U.S. EPA*, filed March 13 at the U.S. Court of Appeals in D.C. On March 15, California, New York, and seven other states petitioned to intervene on behalf of EPA. Oral arguments in this case have not yet been scheduled.

¹⁸ <https://www.nytimes.com/2017/03/03/us/politics/trump-vehicle-emissions-regulation.html>

¹⁹ See, e.g., <http://www.latimes.com/nation/la-na-pol-epa-confirmation-20170118-story.html> and https://www.nytimes.com/2017/03/03/us/politics/trump-vehicle-emissions-regulation.html?action=click&contentCollection=us®ion=rank&module=package&version=highlights&contentPlace ment=1&pgtype=sectionfront&_r=0

²⁰ See Letter from Governor Brown to Administrator Pruitt (https://www.gov.ca.gov/docs/3.15.17_Letter_to_EPA.pdf), Letter from Senator Harris to Administrator Pruitt (<https://www.harris.senate.gov/sites/default/files/Harris%20to%20Pruitt%20re%20EPA%20Midterm%20Evalu.pdf>), and Attorney General Kilmartin Joins Coalition of States Opposing President Trump’s Vehicle Emission Standards Roll Back (<http://www.ri.gov/press/view/29872>)

that any revocation of the waiver or other restriction of California's ability to set its own vehicle emission standards would be "unprecedented" and "undermine our state rights."²¹

The California ARB voted on March 24, 2017 to continue implementing and enforce its existing vehicle emission standards as recommended under the Midterm Review and under its existing waiver. There is no policy or precedent for revoking a waiver that has already been granted. EPA could, however, elect to pursue this course.

Additionally, should California wish to establish more stringent vehicle emission standards, either for model years through 2025 (which the current waiver covers) or for future years, this would likely require an application for a new waiver under Section 209. In that case, EPA could delay review and/or deny the waiver application outright. While California and other state policymakers have vowed to fight any such restriction, any litigation surrounding the waiver could delay the implementation of new standards.

²¹ Letter from Environmental Regulators to Administrator Pruitt
(http://www.eenews.net/assets/2017/03/23/document_gw_02.pdf)

Contacts

For more information on this topic, please contact:

Paul Allen
Senior Vice President
pallen.mjbradley.com
(978) 369-5533

Grace Vermeer Van Horn
Policy Analyst
gvanhorn@mjbradley.com
(978) 369-5533

About Us

MJB&A provides strategic consulting services to address energy and environmental issues for the private, public, and non-profit sectors. MJB&A creates value and addresses risks with a comprehensive approach to strategy and implementation, ensuring clients have timely access to information and the tools to use it to their advantage. Our approach fuses private sector strategy with public policy in air quality, energy, climate change, environmental markets, energy efficiency, renewable energy, transportation, and advanced technologies. Our international client base includes electric and natural gas utilities, major transportation fleet operators, investors, clean technology firms, environmental groups and government agencies. Our seasoned team brings a multi-sector perspective, informed expertise, and creative solutions to each client, capitalizing on extensive experience in energy markets, environmental policy, law, engineering, economics and business. For more information, we encourage you to visit our website: www.mjbradley.com.