

Small Off-Road Engine Regulations Frequently Asked Questions



CARB has been regulating emissions from small off-road engines (SORE) for decades and last amended the regulations in 2021. The regulations are required by state legislation and the 2016 State Implementation Plan. These frequently asked questions outline the details of the regulations and their benefits.

When do the regulations go into effect?

U.S. EPA *authorized* the SORE regulations on January 5, 2025. Because the 2025 model year was already underway, CARB deferred full implementation to the 2026 model year.¹ The regulations apply to manufacturers, sellers, retailers, and distributors producing, distributing, and selling new spark-ignition engines less than or equal to 25 horsepower and require that they certify and label those engines. Manufacturers are not required to certify battery electric equipment.

Is Congress reviewing waivers or authorizations applicable to SORE?

U.S. EPA *transmitted* three California waivers and the SORE authorization to Congress for Congressional Review Act consideration on June 12, 2026.

Can other states adopt the SORE regulations?

No. Federal regulations prohibit other states from adopting California's standards for spark-ignition engines under 50 horsepower.² This has been the law since 2004. Consequently, no state has had the option to adopt California's SORE regulation for more than 20 years.

Is a waiver different from an authorization?

Yes. A waiver is granted by U.S. EPA under section 209(b) of the federal Clean Air Act for new motor vehicles. California regulations that receive waivers may be adopted by other states. An authorization is granted by U.S. EPA under section 209(e) and is specifically for off-road engines and nonroad vehicles.

Do authorizations expire?

No.

¹ Manufacturers Advisory Correspondence (MAC) ECCD-2025-01

² Title 40 of the Code of Federal Regulations section 1074.110



What do the regulations require?

The regulations apply to manufacturers, sellers, retailers, and distributors producing, distributing, and selling small off-road equipment in California. The regulations require equipment to be certified and labeled for sale in California. Replacement engines for gasoline-fueled SORE larger than 225 cubic centimeters may still be sold in California, subject to CARB's requirements. Manufacturers may still certify gasoline-fueled engines and equipment by using emission reduction credits to offset the emissions from SORE. Manufacturers of battery-electric equipment are not required to seek certification under the SORE regulations. Engines and equipment primarily used for commercial construction or commercial farming applications are not regulated by the SORE regulation pursuant to federal law.³

SORE regulations do not affect equipment already sold and in use, and they do not ban gasoline-fueled engines and equipment. SORE regulations do not apply to engines used in stationary equipment or those that use diesel fuel.

Why does California need to adopt SORE regulations?

Six of the 10 most polluted cities in the United States are located in California. Many regions within the state cannot meet federal ozone standards. Communities in these heavily affected areas face disproportionately high rates of asthma and cardiopulmonary illness, making regulatory updates critical to protect public health. In 2021, total smog-forming emissions from SORE already exceeded emissions from light-duty passenger cars in California. By 2031, SORE emissions are projected to be nearly twice those from light-duty passenger cars without the 2021 amendments to the regulations. The SORE amendments will provide emission reductions that will help reduce ozone pollution in California.

What are the emissions benefits of the regulations?

Despite their small size, SORE emit a significant amount of oxides of nitrogen (NO_x), hydrocarbons, carbon monoxide, and particulate matter. Today, a commercial operator using one backpack leaf blower for one hour can generate the same smog-forming emissions as a car driving 1,100 miles. The SORE regulations will reduce emissions of smog-forming emissions by nearly 60,000 tons of NO_x and more than 400,000 tons of reactive organic gases (ROG) by 2043. Cleaner technology for this sector will result in health benefits for Californians, especially for the individuals who use the equipment daily and the communities where they work. Reducing emissions from SORE will help California meet federal air quality standards. In addition to the

³ 40 Code Fed. Reg. §1074.10. 40 Code Fed. Regs. §1074.5 provides the definitions for "primarily used", "commercial", "farming equipment or vehicles", and "construction equipment or vehicles".



emissions benefits, users of zero-emission equipment will enjoy the push-button start, minimal or no maintenance, and quieter operation.

What are the public health benefits of the regulations?

Users of SORE equipment, and the communities where SORE equipment is used, are exposed to harmful air contaminants such as carbon monoxide and particulate matter that embeds in lungs and bloodstreams. The regulations are projected to provide an \$8.8 billion public health benefit by avoiding nearly 900 premature deaths and many hospitalizations and emergency department visits through 2043.

Is CARB going to take away landscape professionals' gas equipment and make them replace it all with zero-emission equipment?

No. The regulations do not affect equipment already sold and in use, and they do not ban gasoline-fueled equipment. No one is required to purchase zero-emission equipment, and users will be able to buy it gradually to replace existing equipment as it wears out. Additionally, CARB is currently certifying gas-powered SORE and will continue to do so through 2032.

Landscapers and other users can continue repairing, maintaining, selling, leasing, and using their CARB-certified gas-powered equipment for its full useful life, subject to any additional rules adopted by local governments. Manufacturers may also provide replacement engines for SORE larger than 225 cubic centimeters, subject to certain requirements, to help users extend the life of their more expensive gasoline-fueled equipment.

Is CARB going to take away residents' gas equipment and make them replace it all with zero-emission equipment?

No. California residents can continue to use, service and repair their gasoline-fueled equipment for its useful life, and they are not required to purchase zero-emission equipment.

What are manufacturers required to do?

Manufacturers who want to sell engines in California must certify their engines to California standards. By model year 2028, emission standards for smog-forming emissions from new engines are set at zero. Manufacturers may use emission reduction credits to certify engines through 2032.

California certification also applies to sellers, retailers, and distributors of SORE equipment.



May I still purchase gasoline-fueled SORE equipment?

Yes. Stores may continue to sell existing inventory that is CARB-certified. Gasoline-fueled engines and equipment have been certified for model years 2026 and 2027. Manufacturers may certify new gasoline-fueled equipment using emission reduction credits.

Is CARB providing financial assistance to landscape professionals to help them buy equipment?

The California Legislature provided \$30 million in the 2021 budget to help sole proprietors and small landscaping businesses purchase zero-emission equipment. This funding was distributed through the [Clean Off-Road Equipment Voucher Incentive Project](#). CARB set aside \$10 million for the first 180 days for micro-landscape businesses (those with fewer than 25 employees) before opening it to the larger group of eligible landscapers. Landscapers received incentives to help purchase approximately 29,000 pieces of equipment, including leaf blowers, lawn mowers, and string trimmers, and 40,000 batteries and chargers.

The [Carl Moyer Program](#) also provides [incentives](#) for commercial and residential zero-emission SORE equipment. CARB has allocated more than \$29 million since 2019 to fund over 27,000 pieces of lawn and garden equipment. The program gives approximately \$130 million annually to the state's 35 air districts who award the funds according to their local priorities, which have included lawn and garden equipment.

Did CARB consider the cost to business owners when developing the regulations?

CARB considers costs and determined that, while upfront purchasing costs can be higher, people who purchase zero-emission equipment have lower overall costs due to savings in fuel and maintenance. The operational cost savings are in addition to the reduced health care costs and avoided lost workdays from fewer respiratory and other illnesses tied to pollution.

What feedback has CARB received about zero-emission technology?

Zero-emission landscape equipment has improved considerably over the years. Manufacturers offer a full range of equipment that can often match or beat a gasoline-fueled equivalent in terms of power and functionality. Through surveys, commercial landscapers have indicated that zero-emission equipment has enough power to do the job. Users also prefer the quick starts that require the push of a button instead of "pulling the cord" multiple times, the reduced noise and vibration, and not smelling gasoline fumes. Zero-emission equipment also requires less maintenance than gasoline-fueled equipment.



Users have options for battery capacity when making purchase decisions. Those who value longer runtime may choose to purchase higher-capacity batteries, including backpack batteries. Those who value lighter-weight equipment or prefer not to wear a backpack may choose to purchase lower-capacity batteries.

Besides the most common landscaping equipment like leaf blowers, what are examples of other SORE equipment included in the regulation?

- Chainsaws (< 45 cc)
- Edgers
- Hedge trimmers
- Lawn mowers
- Leaf blowers
- Log splitters
- Portable generators
- Pressure washers
- Riding mowers
- String trimmers

Why are portable generators included in the regulations?

In 2020, portable generators accounted for 14% of the total population of SORE equipment and 19% of all NO_x and ROG emissions from SORE, which makes them a significant emissions source that impacts air quality and public health. Portable generators provide important back-up power to many residents when the power supply is off due to wildfire and high winds, among other reasons. To account for this, CARB developed the regulations to phase-in requirements for portable generators and allow more time for a wider variety of zero-emission alternatives to be commercially available and competitively priced in the marketplace.

When supply was short at the beginning of 2025 due to the Los Angeles wildfires, CARB provided for manufacturers, retailers, and distributors to sell 49-state portable generators for six months while supply caught up. Larger portable generators and stationary generators are not included in the regulations and can still be used for larger back-up power needs. CARB continues to track and assess the progress towards zero-emission standards for portable generators and their availability on the California market.