



SUSTAINABLE PRACTICES FOR AUTOMOTIVE AND FLEET SERVICES

Fleet maintenance is an integral part of Los Angeles County (County) operations. Fleet vehicles move County employees and patrons every day, whether it be emergency vehicles such as fire trucks and patrol cars, work trucks for road maintenance and parks, transport vehicles moving inmates, or golf carts moving patrons on the golf courses. A properly maintained fleet reduces health risks, need for repairs and replacement, and pollution.

The County, State, and Federal Government have adopted several regulations and policies related to fleet maintenance to reduce and mitigate environmental impacts. The Board of Supervisors' Clean Fuel – Sustainable Fleet policy was adopted in 2021. The policy requires all newly purchased department vehicles to be zero-emission vehicles. Fleet managers can implement sustainable automotive practices to help the County reduce their carbon footprint and costs associated with replacement and maintenance. Sustainable automotive practices will also help the County comply with other requirements such as Senate Bill 1383 that mandates procurement of renewable fuel from recovered organic waste.

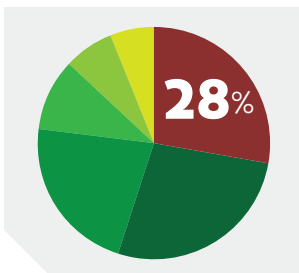


Fleet sustainability refers to activities centered around reducing the environmental impact of fleet vehicles, such as:

- Right-size fleet for business needs
- Minimize miles traveled by using GPS tracking and efficient routing
- Proper maintenance to improve life-span, performance, and efficiency
 - Fuel-efficient driving
 - Use of alternative fuels
 - Reduction of idling and carbon emissions
 - Adoption of hybrid/electric vehicles
 - Vehicle pooling
- Alternative modes of transportation
- Collection and proper disposal of fleet fluids, parts, batteries, and tires

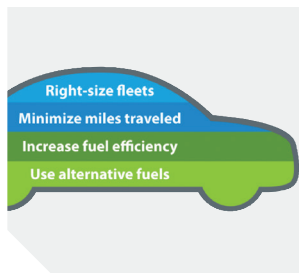


According to the U.S. EPA, in 2022, 28% of greenhouse gas emissions were from transportation.



Source: [epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions](https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions)

Core Principles of Sustainable Fleet Management



Source: National Renewable Energy Laboratory

In Los Angeles County, approximately ten million waste tires are landfilled annually, enough to resurface 5,000 miles of road.



Source: CalRecycle

Tips, Resources, and Assistance



Review recommended oil change intervals for your fleet at: calrecycle.ca.gov/usedoil/oilchange/



Consider using reusable oil filters instead of disposable. A reusable oil filter has an adapter plate and wire cloth filter that can be removed and cleaned in a parts washer. Find out more about reusable oil filters on the EPA.gov website: [epa.gov/sites/production/files/2016-02/documents/fleet_reusable.pdf](https://www.epa.gov/sites/production/files/2016-02/documents/fleet_reusable.pdf)



Review several green fleet resources offered by the U.S. EPA: www.energy.gov/femp/resources-federal-fleet-management



Check out the Department of Energy's Sustainable Federal Fleets resources designed to help with green vehicle and fuel decisions: www.energy.gov/eere/femp/federal-fleet-management



Review a report by the Federal Energy Management Program on Core Principles of Sustainable Fleet Management: www.energy.gov/sites/default/files/2020/11/f80/federal-best-practices-sustainable-fleet.pdf



Learn how to incorporate recycled content purchases into your fleet purchasing with EPA's Comprehensive Procurement Guidelines: www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program



Review information provided by Los Angeles County on lead-acid battery management: fire.lacounty.gov/wp-content/uploads/2019/08/HHMD-Fact-Sheet-Spent-Lead-Acid-Battery-Management.pdf

Case Studies

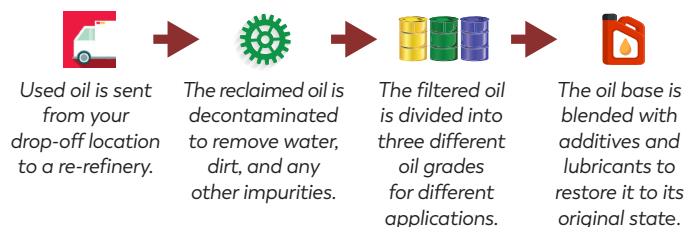
RECYCLE MOTOR OIL & USE RE-REFINED OIL

County departments are required to purchase and use re-refined motor oil in all County motorized vehicles and equipment. Re-refined oil, or recycled oil, is a way to reduce using virgin materials and support the market for recycled oil. This practice, coupled with proper collection and recycling of used motor oil, helps contribute to a full lifecycle of reusing motor oil. Changing oil on a routine schedule will help to maintain vehicle life and reduce emissions.

Fire Stations in Los Angeles County maintain their own fleet including fire trucks and other rigs. At Fire Stations 81 and 131, used oil is collected and stored on-site for recycling. It is important to store used motor oil and filters in a leak-proof container separate from gasoline automotive fluids, other liquids, and debris. Contamination of used oil renders it unrecyclable, therefore requiring it to be disposed of as hazardous waste. Any used oil filters should be drained and placed in separate containers for recycling. Senate Bill 546 (2009) requires that all used oil is recycled through a certified facility. Used motor oil is insoluble, and spills pollute soil and water. Motor oil should never be poured into sinks, down sewage drains, or onto the ground.



HOW OLD OIL IS MADE NEW:



Reclaimed oil is processed into three different grades:

Light viscosity: General applications

Low viscosity: Automotive applications

High viscosity: Heavy-duty applications

All the good reclaimed oil can do:

One gallon of reclaimed motor oil yields the same amount of lubricating oil as 42 gallons of crude oil.

CREATE FLEET MAINTENANCE GUIDELINES

Fleet maintenance departments need to adhere to various requirements and practices for proper management of tires, batteries, vehicle fluids, and parts. The EPA's SmartWay Transport Partnership provides fleets with credible tools, data, and standards—at no cost—for measuring, benchmarking, and improving environmental performance, including reducing transportation emissions, fuel use, and participating in take-back programs to divert landfill waste.

Additional information can be found at the EPA website: epa.gov/smartway

The Sheriff's Industry Station manages their fleet on-site. At the fleet maintenance area, engine oil and other vehicle fluids are changed and tires are inspected. Through the fleet maintenance contractor, collection containers of used oil are picked up for recycling.

Consider contracting with a service provider to pick up used oil, tires, and other vehicle parts on a schedule. Be sure to request regular reporting on the quantity of items reused or recycled. Educate staff members to increase awareness about requirements, storage, and reporting.



Best Practices

BATTERIES

Facilities with fleets are major users of lead-acid and/or rechargeable batteries. The Department of Toxic Substances (DTSC) requires strict handling of all batteries due to the toxic nature of chemicals they possess.



- Undamaged batteries should be stored upright on a covered pallet over a non-reactive, curbed, and sealed surface such as coated concrete or asphalt.
- Care should be taken to prevent the terminals from short-circuiting.
- Damaged batteries are batteries that are cracked, broken, or missing one or more caps. Facilities must store and arrange for transport of damaged batteries in non-reactive, structurally secure, and closed containers such as polyethylene buckets or drums. If missing caps can be replaced and there are no other leaks or damage, the battery is considered intact and can be diverted from disposal in conventional landfills.
- Facilities that generate no more than 10 batteries per year, or store or transport no more than 10 batteries at one time, are not subject to the DTSC reporting and record keeping requirements as long as the batteries will go to someone who stores, recycles, uses, reuses, or reclaims them.

TIRES

The California Tire Recycling Act (mandated by CalRecycle) regulates the state's waste tires through an established tire fee and the California Tire Recycling Management Fund. The Act requires a person who purchases a new tire to pay a California tire fee of \$1.75 per tire.

Senate Bill 876 developed a used/waste tire hauler program and manifest system. All waste tire generators, haulers, and end use facilities must comply with the California Uniform Waste and Used Tire Manifest System, which requires copies of each manifest or trip log be submitted to CalRecycle.

Best practices for managing tires include:

- Keep tires inflated to reduce wear and improve gas mileage.
- Start a waste tire recycling program. Recycled tires can be used for roadway rehabilitation projects and other road maintenance projects.

GENERAL AUTOMOTIVE REPAIR AND MAINTENANCE

Implement best workplace practices for automotive repair and fleet maintenance to reduce your waste.

- Switch to washable towels for washing cars and trucks and use refillable spray bottles instead of aerosol cans.
- Purchase re-furbished parts when possible.
- Train all employees working on the fleet about waste reduction practices.
- Switch to aqueous cleaners instead of mineral spirits. Mineral spirits contain volatile organic compounds and are considered a hazardous waste. Aqueous cleaning units are water-based solutions that contain minimal volatile organic compounds and can last longer than solvents. Find out more about the benefits of using aqueous solutions at: epa.gov/sites/production/files/2016-02/documents/autoclean.pdf
- Keep vehicle exterior clean: clean cars are 10% more fuel efficient than dirty vehicles. Wash cars in approved facilities for reduced water usage and to avoid polluting stormwater.
- Recycle antifreeze to prevent stormwater pollution.
- Consider using rechargeable handheld vacuum cleaners and waterless car wash products for spot-cleaning. This will reduce energy use, water use, and emissions from taking fleet vehicles to the car wash for minor cleanings.