

Water District Realizes Dramatic Savings

Faced with reduced revenues from lower water consumption by customers, the Eastern Municipal Water District needed to shrink operating costs while still carrying out projects required by state and federal laws.

Located in drought-stricken Riverside County, CA, the Eastern Municipal Water District (EMWD) provides fresh and recycled water and wastewater services to a 555-square mile area. Forced to establish mandatory water usage restrictions, EMWD needed to reduce operating and labor costs to make up for shrinking revenues from lower customer consumption.

According to Mark Iverson, EMWD Maintenance Director, one of the agency's initial goals was to make more efficient use of its 350-vehicle fleet. "When the district extended the criteria for vehicle life from 10 years/200,000 miles to 12 years/250,000 miles, we began a study that covered all aspects of fleet management and efficiency. This assessment resulted in changes that have already yielded substantial cost savings and will undoubtedly prolong the life of our fleet."

After evaluating 25 fleet management products, EMWD installed Networkfleet (www.networkfleet.com) on all 1996 or newer vehicles. In addition to the potential savings in operating costs, EMWD chose Networkfleet for its plug-and-play installation capability and 24/7 roadside assistance, which is included in the cost.

Iverson explained, "Unlike other GPS products, Networkfleet connects directly to the engine's onboard diagnostic unit (OBD-II) without cutting or splicing wires. After a brief training, EMWD employees completed the installation

on 300 vehicles—without hiring additional staff. It took less than 30 minutes per vehicle."

Because the fleet tracking system connects to the engine's OBD-II, EMWD can now remotely monitor engine diagnostics, fault codes, and emissions control system status. For example, EMWD staff receives an immediate alert when there is an engine problem, allowing them to proactively repair the vehicle before the problem worsens. "Networkfleet also automatically collects emissions data, which eliminates the need to bring vehicles in for biennial smog checks," Iverson noted. "Proactive maintenance and automated smog checks save both time and money."

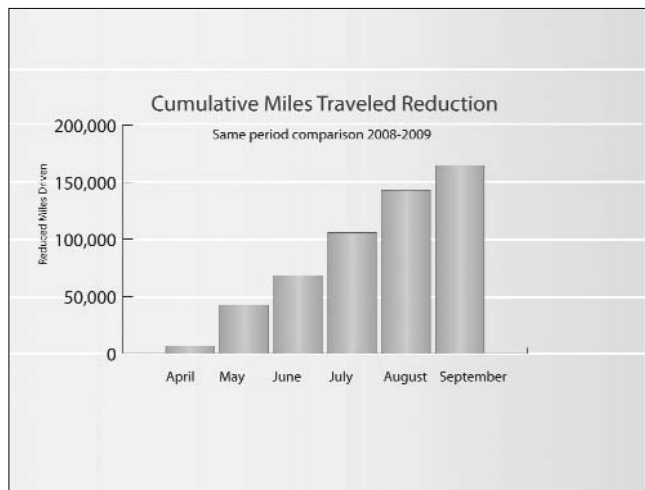
EMWD initially focused on drivers' habits such as speed and idle time that have a huge impact on fuel usage. For example, supervisors receive alerts from the fleet tracking system if drivers exceed a certain speed limit. This simple measure has improved miles per gallon while reducing speed-related accidents.

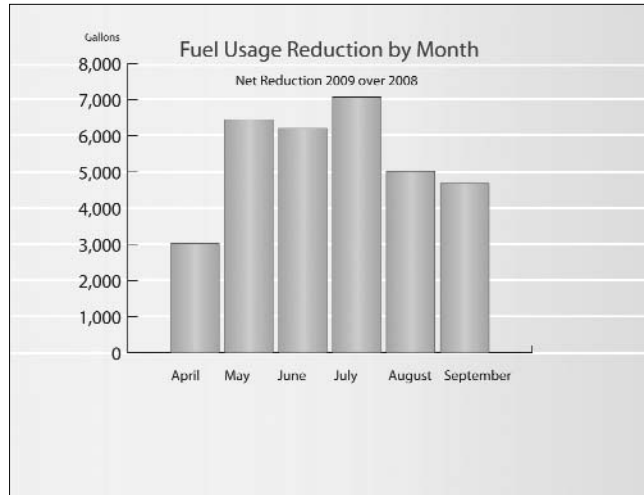
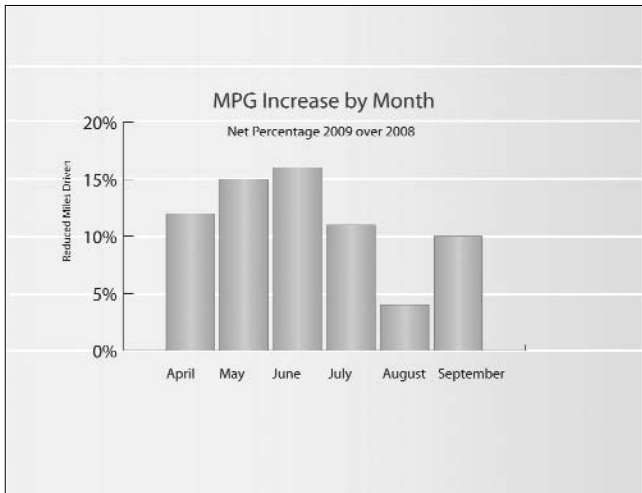
Since supervisors can now log into the tracking system to view a GPS-based map of vehicle locations, they can dispatch the vehicle closest to an emergency or other work not scheduled in advance. With more efficient vehicle usage, EMWD has lowered the average number of miles driven per vehicle. (See Figures 1, 2, and 3.) In fact, within the first six months of operation, employees drove about 165,000 fewer miles, and fuel costs declined by about \$79,000 (as compared to the previous year's data for the same period).

Improved routing has also resulted in less time behind the wheel, giving EMWD employees more time to focus on work-related tasks. The payoff has been a significant reduction in the backlog of work.

"Even though our payroll is the same, we wanted to attach a metric to this increased productivity," said Iverson. "So we took the reduction in miles driven and divided it by our fleet's average speed to arrive at the number of hours of driving time saved. We then multiplied that number by our average hourly labor rate. The final result is a savings in labor costs of nearly \$354,000." (See Figure 4.)

"We recouped our one-time equipment and startup costs in three months," Iverson said. "And the money we save in fuel and labor more than pays for our monthly Networkfleet subscription fee."





In addition to lower fuel and labor costs, reducing the fleet's total miles driven and idle time has resulted in a measurable reduction in greenhouse gases. As shown on the Cumulative Emissions Reductions chart (See Figure 5.), the 300+ vehicles that are equipped with the tracking system have shown a significant reduction in carbon dioxide emissions. In addition to CO₂, EMWD has reduced vehicle emissions for carbon monoxide, nitrous oxides, PM10 (particulate matter), and methane.

EMWD employees benefit as well. "GPS readings can prove drivers were not speeding at the time of an accident," Iverson added. "Employees who go on remote service calls at all hours gain peace-of-mind by knowing that Networkfleet can pinpoint and track their location information."

The tracking system's diagnostic information, alerting, and reporting capabilities have also been used to mitigate issues arising from warranties not being honored due to improper maintenance. Iverson explained, "Employees had a tendency to continue to drive vehicles even after the check engine light went on. Now, we are notified of all Diagnostic Trouble Codes that activate the check engine light and can make sure all of our vehicles are maintained properly. We are also notified of any manufacturer recalls for the entire fleet."

Savings on insurance is another benefit that adds up. "Before we purchased Networkfleet, our insurance premiums were scheduled to go up due to a rise in speed-related accidents. Now that we can monitor and help control driving habits, our premiums have actually gone down," continued Iverson.

"Many organizations have this misplaced idea that a GPS system is only useful in situations where employees are suspected of misusing vehicles," Iverson concluded. "Or they think that shaving a few miles off the total number of miles driven in one day is inconsequential. They don't realize how incremental savings add up to a significant amount of money, or that most employees actually benefit from such devices."

EMWD expects long-term and recurring benefits from the tracking system to be:

- Extended life of its 350-vehicle fleet.
- Continued savings from fuel usage and more efficient use of employees.
- Incremental savings from reduced insurance premiums, elimination of physical smog checks, and improved maintenance and engine diagnostic capabilities.

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