

JPIASource

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ACWA JPIA Risk Management for the Water Industry

Emerging Vehicle Technology and Telematics



Construction Sites
Equipment Sensors
Asset Tracking
Inspections
Operator Training



With all of today's available technology, we are connected more than ever. Water agencies use programs such as Teams or Zoom for meetings and chat features to stay connected.

When it comes to vehicles and equipment, manufacturers have been improving the safety of drivers, passengers, and pedestrians through technology. Recent examples include backup cameras, smart headlights, blind spot warning systems, lane departure warning systems, and even drowsy driver alerts. Several vehicle manufacturers are offering these items as standard safety features.

In 2013, the JPIA initiated its [Commitment to Excellence \(C2E\) Program](#) as a mechanism to develop best management practices while improving safety in our frequent and costly loss categories. These Focus Categories are *Construction, Infrastructure, Employment Practices, Ergonomics/ Falls, Wildfires, and Vehicle Operations*. Examples of resources in the Vehicle Operations Loss Reduction Focus Area are sample driving policies and procedures, training information, accident/incident forms, checklists, and employee recognition best practices.

Several JPIA members have implemented risk mitigation practices to reduce their exposures to vehicle-related losses by incorporating technology into their Vehicle and Equipment Use Programs. After a vehicle incident, Florin Resources Conservation District utilized the [JPIA's Risk Control Grant Program](#) to retrofit their utility fleet vehicles with backup cameras. Scotts Valley Water District installed a backup camera with a microphone for two-way communication on their new vacuum excavator. For this safety improvement, the District won a [H.R. LaBounty Safety Award](#).



Rear camera on the excavator



Excavator in-cab dash monitor

“You can’t manage what you don’t measure. Telematics allow organizations to manage their fleet through data and have the ability to adapt to new regulations and technologies.”

- SCV Water

Vehicle technologies referred to as “telematics” include vehicle backup cameras, smart headlights, blind spot warning systems, lane departure, and dash cameras. Telematics is transferring or sending vehicle-related information using wireless cellular data, or Wi-Fi, to a central location or dashboard. The purpose is to capture and manage vehicle data, reduce environmental impact, create efficiencies, and improve safety. This allows agencies in real-time to be better connected with their operations and equipment.

Top logistic companies such as Amazon, United Parcel Service (UPS), and Uber, utilize telematics to track shipments, vehicles, inventory, arrival times, flight information, fuel consumption, driver safety, and more.

On construction sites, equipment run times, maintenance due, inspections, and training records can all be tracked using telematics. Telematics can also be used to prevent struck-by accidents by using cameras, proximity detection sensors, and geo-fencing. Struck-by accidents remain a Cal/OSHA and Federal OSHA [Focus Four](#) emphasis. According to the Centers for Disease Control (CDC) in 2019, struck-by incidents by an object or equipment were the most reported injuries, and struck-by incidents by vehicles accounted for 47 percent of all construction fatalities.

In the public sector, telematics is being implemented in a variety of ways. Transportation agencies within the public sector can monitor arrival times, mileage, route efficiencies, inspections, and fuel consumption. Waste management entities can track bin pick-ups, missed bins, and customer complaints. Customers can look online instead of calling to see past and upcoming street sweepers, snowplows, and other public service arrival times, freeing up staff time.

Some water agencies are beginning to use telematics features for their fleet vehicle health. Through telematics, notifications can be sent when a vehicle produces a diagnostic trouble code or is due for service such as an oil change, tire rotation, filter change, SMOG due, and more. Improving fleet vehicle health helps reduce the likelihood of breakdowns, mechanical failures, and accidents related to missed maintenance while improving the safety of the driver, passengers, and the public.

The use of telematics can provide agencies with great benefits. JPIA members that have implemented or are considering fleet and heavy equipment telematics are enhancing their existing vehicle operations programs, which is a Commitment to Excellence (C2E) Program best management practice.



Test Your Knowledge - True or False

1. Telematics can improve the safety of drivers, passengers, and pedestrians.
2. Vehicle Operations is a JPIA Loss Reduction Focus Area.
3. Only newer vehicles have telematics capabilities.
4. On construction sites, equipment run times, maintenance due, inspections, and training records can all be tracked using telematics.

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The *JPIASource* is not intended to be exhaustive. The discussion and best practices suggested herein should not be regarded as legal advice. Readers should pursue legal counsel or contact their insurance providers to gain more exhaustive advice.

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Answers

1. True
2. True
3. False, older vehicles can be retrofitted to allow telematics.
4. True