CITY OF FORT LAUDERDALE, FLORIDA

How to Improve Fleet Sustainability

Sandy Leonard, CAFM
Program Manager, Fleet Services

Drew Newstrom
Automotive & Equipment Specialist

Quick facts

- 180,000 citizens
- Over 12 million visitors annually
- Fleet of 1,700+ vehicles including public works, police, fire, and more

"Above & Beyond" Award

Avg Distance Driven
81.4 mi

TOP VEHICLES	**MILES**
V10375 2017 F550 EC 4X2	622.3 mi
V10003 2016 F550 EC 4X2 DRW	328.2 mi
V6856 2015 F550 EC 4X2 DRW	286.9 mi
V10774 2019 International 4300 Dump	271.3 mi
V10472 2018 Ford T250 cargo	270.6 mi

Avg Hours Driven
5.4 h

TOP VEHICLES	**HOURS**
V10375 2017 F550 EC 4X2	35.6 h
V6952 2015 Int'l 4300 Johnston VT651 Sweeper	26.1 h
V10003 2016 F550 EC 4X2 DRW	20.7 h
V6991 2016 CHEVROLET COLORADO CC 4X2	19.4 h
V10769 2018 Nissan Frontier	19.3 h

- No violations
- 1-5 violations
- >5 violations
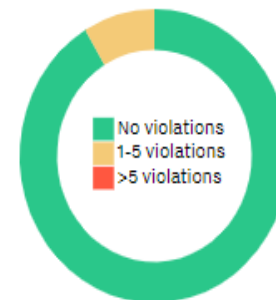
Avg Violations
0.1

LEAST SAFE VEHICLES	**VIOLATIONS**
V7097 2016 F550 EC 4X2 DRW	3.0
V10443 2017 Int'l 7400 12CY Dump	3.0
V10318 2017 F650 5 CY DUMP	2.0
V10947 - 2019 Nissan Leaf	2.0
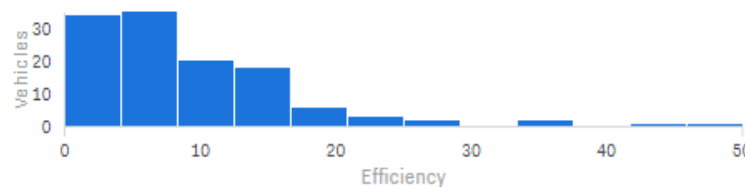V6423 2010 Int'l 4300	2.0

Fuel Usage
View Details

- Fuel used driving
- Fuel wasted
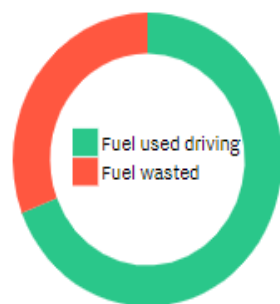
Total Fuel Used
2057.6 gal

TOP FUEL CONSUMERS	**FUEL USED**	**FUEL WASTED**
V6254 2009 F450 RC 4X2	124.6 gal	8.5 gal
V10269 2017 Int'l	89.0 gal	23.6 gal

Fuel Efficiency
View Details

Avg Efficiency
9.6 mpg

MOST EFFICIENT VEHICLES	**EFFICIENCY**
V6437 2010 TOYOT PRIUS HYBRID	50.1 mpg
V7099 2016 TOYOTA PRIUS	45.6 mpg

Idle Hours
View Details
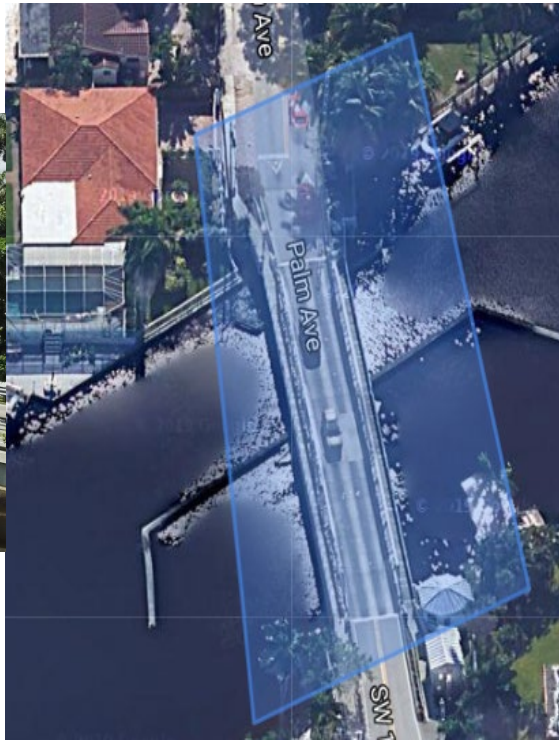
Total Idle Hours
994.4 h

Estimated Cost
$1909.27

TOP IDLERS	**IDLE TIME**	**FUEL WASTED**
V10269 2017 Int'l AquaTech Vac/Jetter	37.0 h	23.6 gal

Tracking Over-Weight Limit Vehicles

▶ Geofences and alerts for increased visibility

▶ Reduced over-weight vehicles crossing historic bridge by 90%

Historic Snow-Reed Swing Bridge

Improved Citizen Response

▶ Real-time fleetwide GPS tracking

▶ Power Take-Off (PTO monitoring)

▶ Enhanced clean-up after natural disasters

▶ Improved dispatch & communication with residents

Temperature Sensors

▶ Alert the officer before we have a "hot dog"

▶ Used in Ambulances to keep medications at the proper temperature

▶ Check temperatures across the city (pending)

Tracking of Real Time Operation

▶ Lack of information about fleet performance and operation

▶ Visibility into the tractors cleaning the seaweed off the beach each morning

▶ See when claw trucks picked up debris at each house

▶ Used in Accident Review Committee to verify accidents and to learn ways to mitigate accidents

▶ Wi-Fi enabled GPS

    ▶ TLS1.2 Protocols

    ▶ AES256 encryption

VEHICLE	EQUIPMENT	TIME USED ▼	ACTIVATIONS	UTILIZATION	DISTANCE
V6978 2014 Int'l 4300 Wayne Gladiator Sweeper	Sweeper	4h 55m	6	45%	29 mi

V6978 2014 Int'l 4300 Wayne Gladiator Sweeper

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2016 INTERNATIONAL MA025

📍 1345 Middle Street, Fort Lauderdale, FL   Street View ⧉

◄ Live Share

2 mph (25 limit)

Connected hotspot clients	0
VIN	1HTMMAAN7GH001358
Fuel	59%
Engine check light	Off
Odometer	20,109 mi
Engine	Running
Ambient Air Temp	122°F
Barometer	14.72 Psi
Battery Voltage	13.85 V
Coolant Temp	181.4°F
Engine Load	37 %
Engine Speed	703 RPM
Manifold Temp	228.2°F
Oil Pressure	24.95 Psi
Sweeper	Off
Gateway	GG4A-A2N-ZUW

1:00 AM   2:00 AM   3:00 AM   4:00 AM   5:00 AM   6
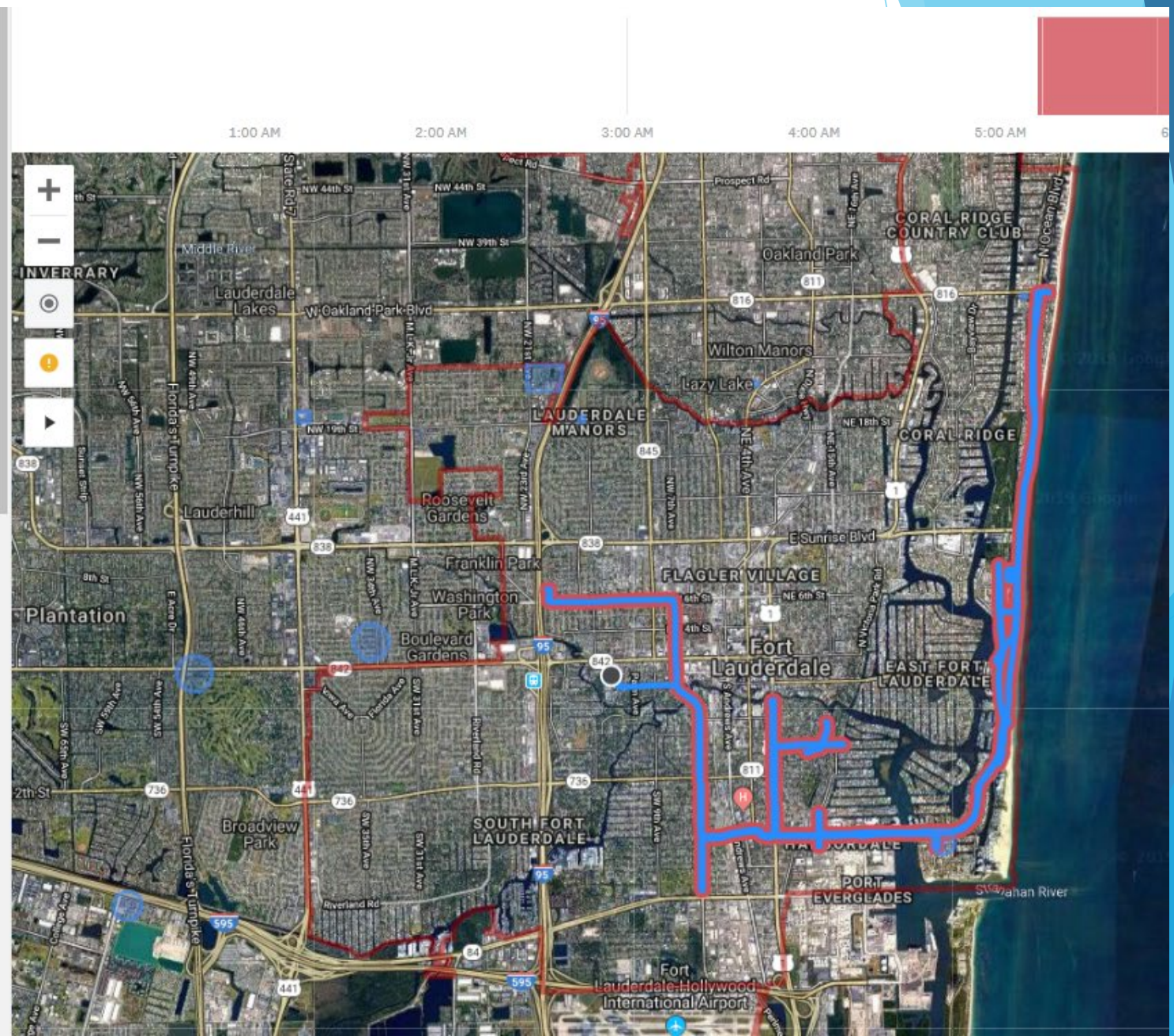
Maintenance

- Allows us to be proactive

- We can see if dealers are really working on our vehicles.

- Reduced downtime by 28%

- 24% fewer vehicles are out of service

V6089 2008 WORKHORSE W42

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📍 Plant A   Street View ⧉

◀ Live Share

|	
Connected hotspot clients	0
VIN	5B4KPD27483431849
Fuel	▰▰▰ 95%
Engine check light	Stop, Warning, Protect, and Emissions
Odometer	41,555 mi
Engine	Off
Gateway	G9KJ-YVY-PAA

1 ENGINE FAULT

- TxId: 33 SPN: 98 – Engine Oil Level FMI: 1 (Low—most severe) Count: 1

Safety Improvements

- ▶ Safety Score Includes:
  - ▶ Total Harsh Events
    - ▶ Breaking
    - ▶ Turns
    - ▶ Acceleration
  - ▶ Total Miles Driven
  - ▶ Total Time Driven
  - ▶ Time Over Speed Limit

Average Safety Score
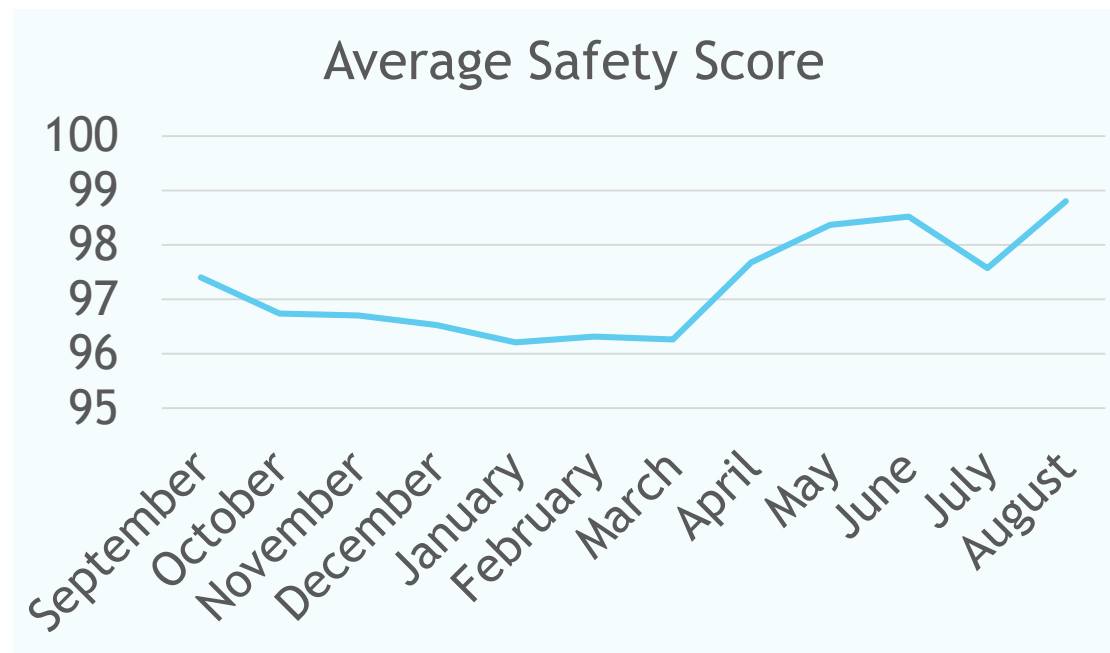
Unforeseen Benefits

▶ Recovered stolen vehicle

▶ Saved a life

Sandy,

I just wanted to let you know that last Friday, GPS helped us save a life. One of my Meter Shop staff was late for a meeting with his supervisor. We were unable to reach him by phone. The supervisor used GPS to locate his City vehicle and went to investigate. Upon arrival, the supervisor found the employee unconscious in his vehicle and called 911. He was taken to Holy Cross hospital where he was admitted.
It is frightening to think what may have happened to him if we couldn't locate him with our GPS system.

Thanks!

Rick Johnson | Utilities Distribution & Collection Systems Manager

Looking Ahead

- Tracking Electric Vehicle charge and diagnostics

- Monitor temperatures throughout city

- Driving sustainability initiatives

- Live Sharing links for public tram

- Add beacon through tunnel to allow continual GPS tracking (Fix dead spots)

Questions?

- Sandy Leonard: SLeonard@FortLauderdale.gov
  - 954-828-5781

- Drew Newstrom: DNewstrom@FortLauderdale.gov
  - 954-828-5710