

- ◆ Metropolitan Police Department
- ◆ Fire & EMS Department
- ◆ Department of Public Works
- ◆ Office of the State Superintendent of Education
- ◆ District Department of Transportation

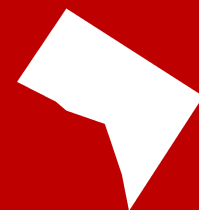
★ ★ ★ GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

★ ★ ★
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CAPSTAT

FLEET 2.0



Office of Performance Management

AGENDA

◆ Review & Discuss

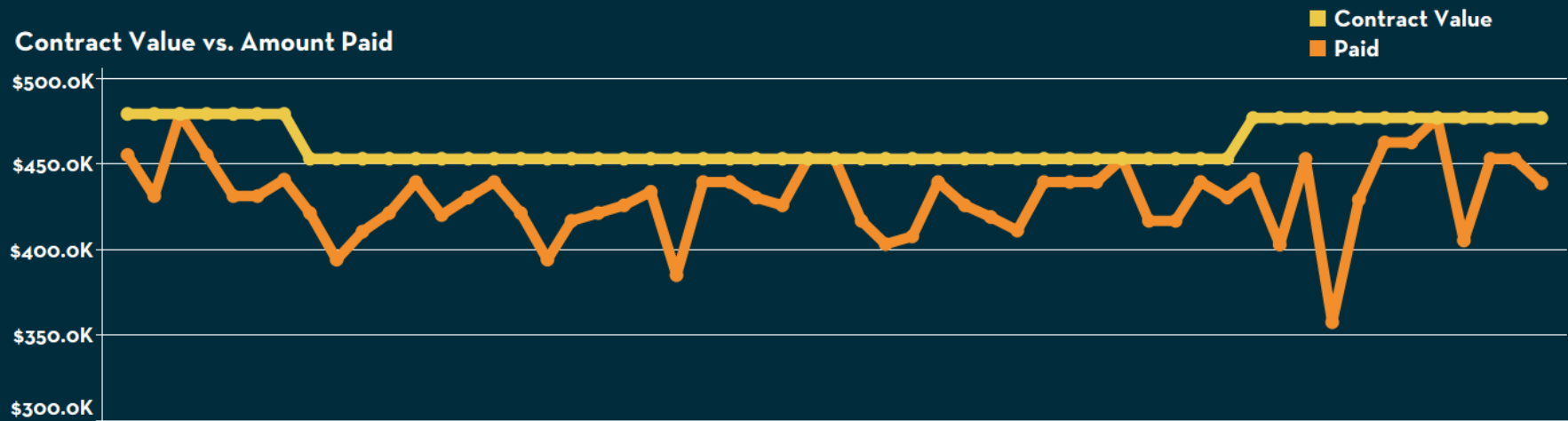
- Fleet Size, Budget, Staffing & Maintenance Provider
- Maintenance Performance Indicators:
 - MPD
 - FEMS
 - DPW
 - OSSE
- Fleet Maintenance Vendors
- Fleet Mechanic Turnover
- Challenges & Recommendations

Size, Budget, Staffing & Maintenance Provider

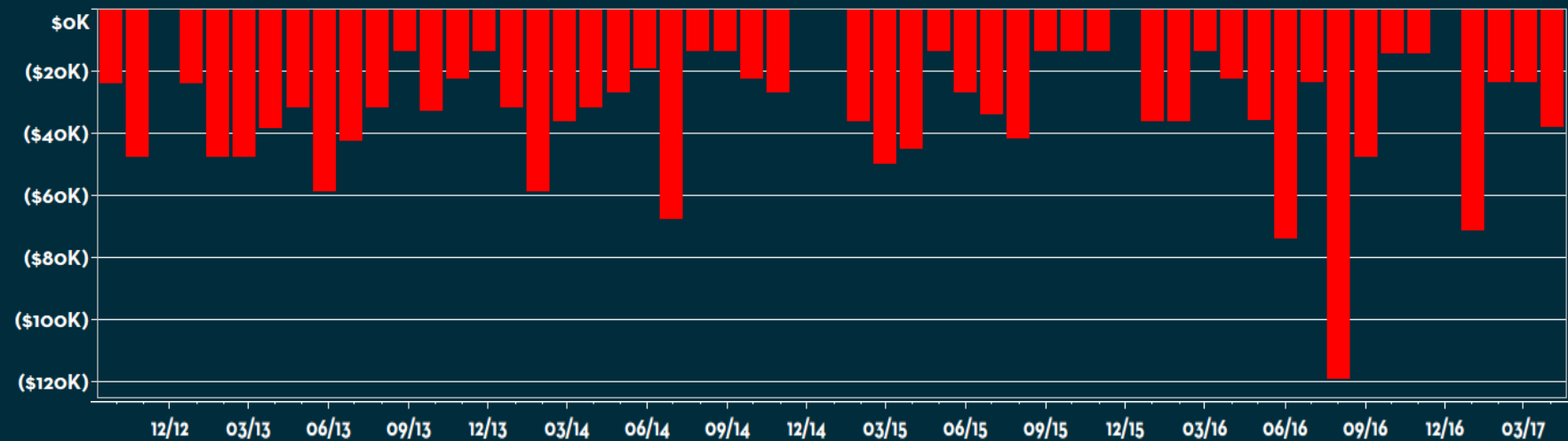
Agency	Size	FY17 Budget	Mechanic FTEs	Service Provider
MPD	1,633	<ul style="list-style-type: none"> Maintenance: \$7.1M 	NA	Outsourced
FEMS	342	<ul style="list-style-type: none"> Maintenance: \$1.7M 	<ul style="list-style-type: none"> FTEs: 38* Vacancies: 8 	In-house/outsourced combo
DPW	2,419	<ul style="list-style-type: none"> Maintenance: \$15.8** 	<ul style="list-style-type: none"> FTEs: 57 Vacancies: 5 	In-house/outsourced combo
OSSE	554	<ul style="list-style-type: none"> Maintenance: \$3.2M 	<ul style="list-style-type: none"> FTEs: 9 Vacancies: 0 	In-house/outsourced combo

*As of June 1st, **Includes DDOT

Contract Value vs. Amount Paid



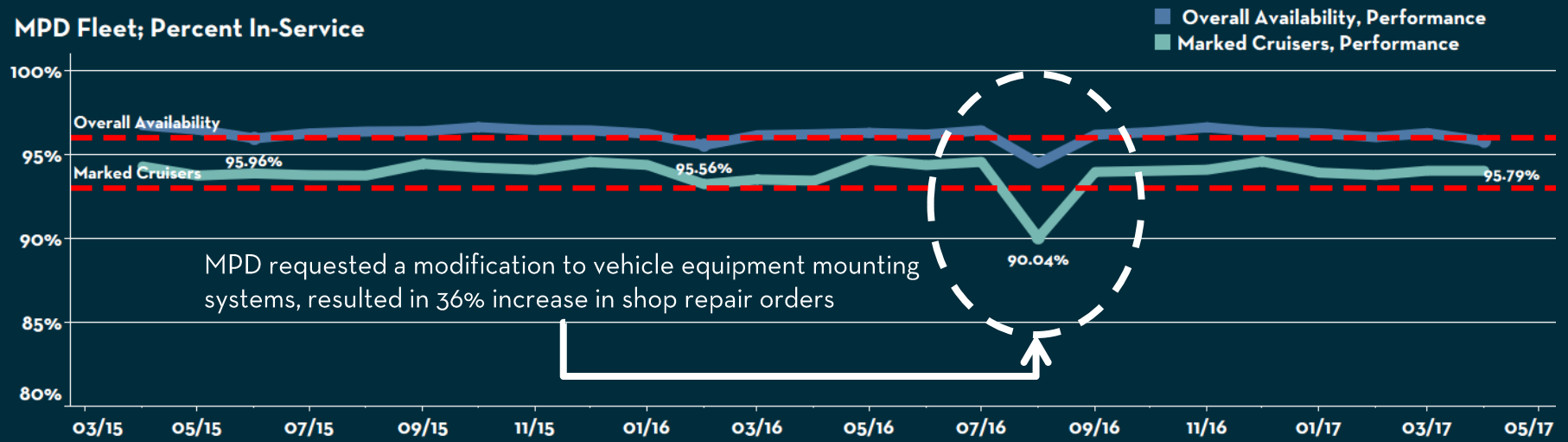
Performance Based Reductions



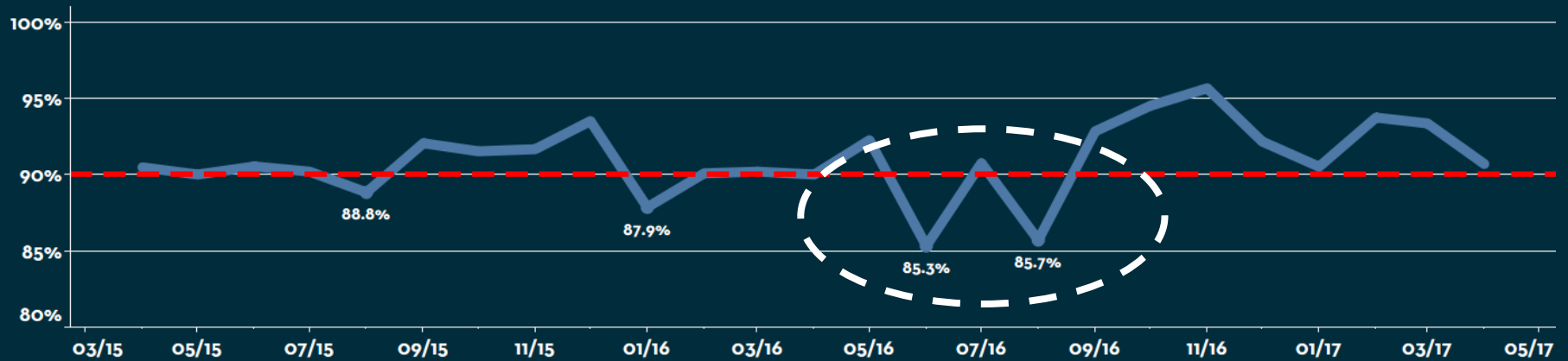
MPD Performance Based Contract Payments*

*Maintenance work is 100% outsourced, does not include funding for 5 FTEs that manage fleet operations at MPD

MPD Fleet; Percent In-Service

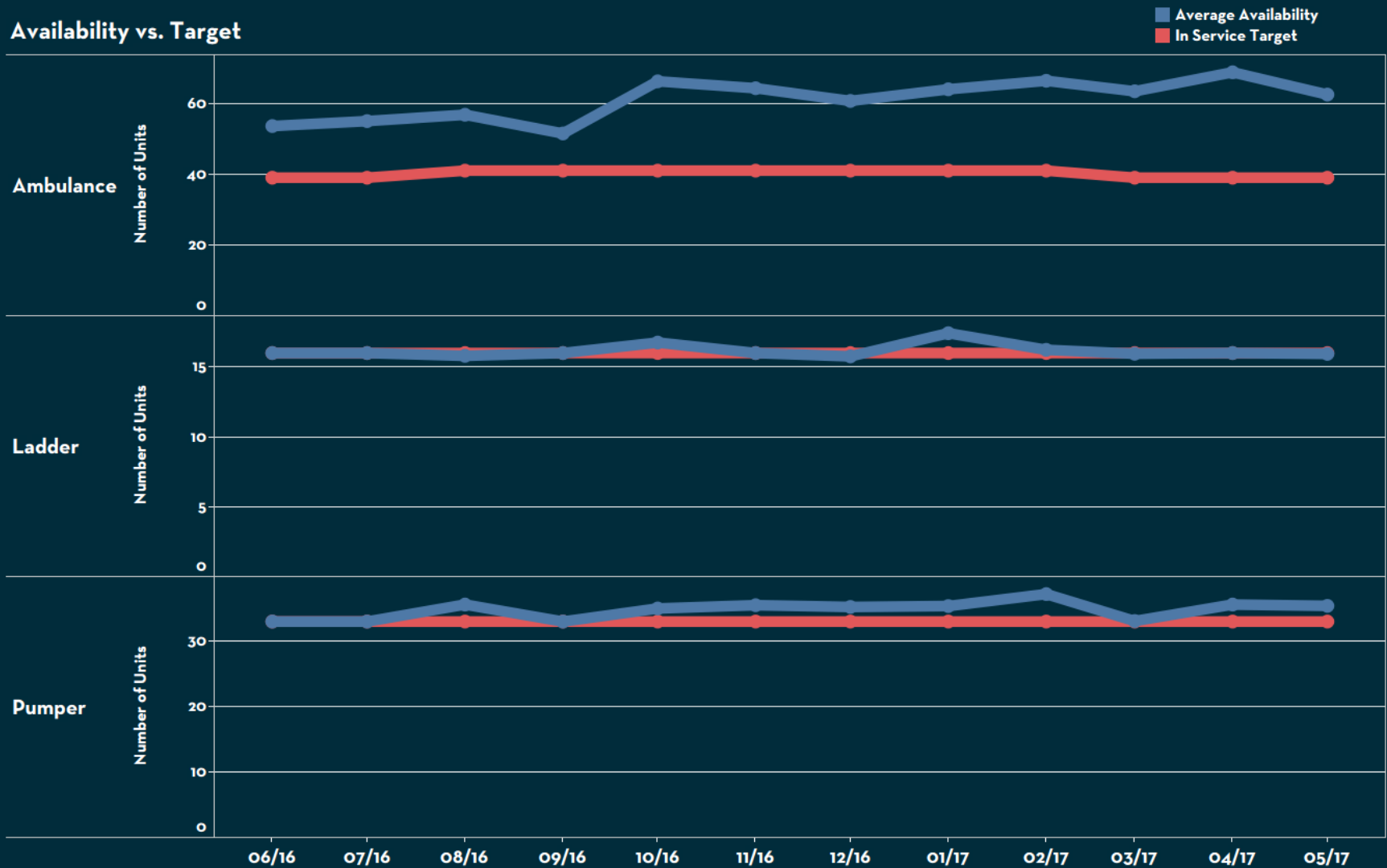


Preventative Turnaround Time (<48hrs)



MPD Contractor Performance: In Service & Preventative Maintenance

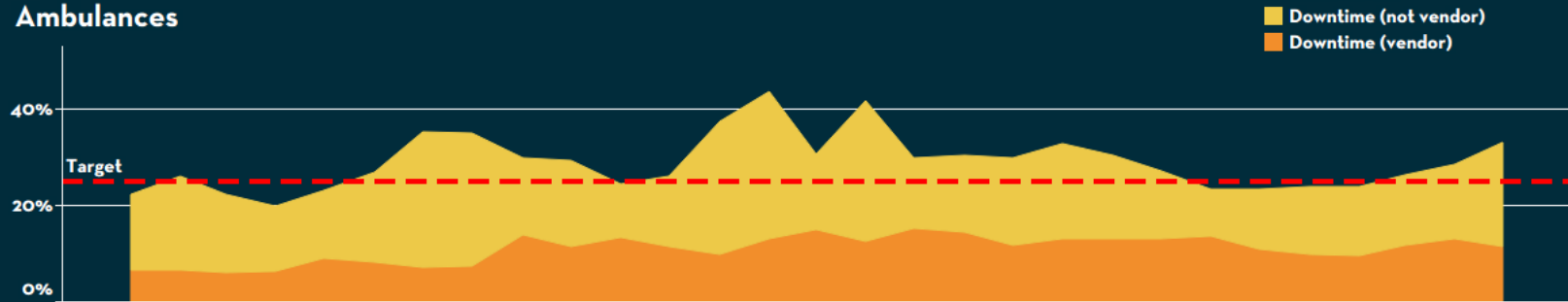
Availability vs. Target



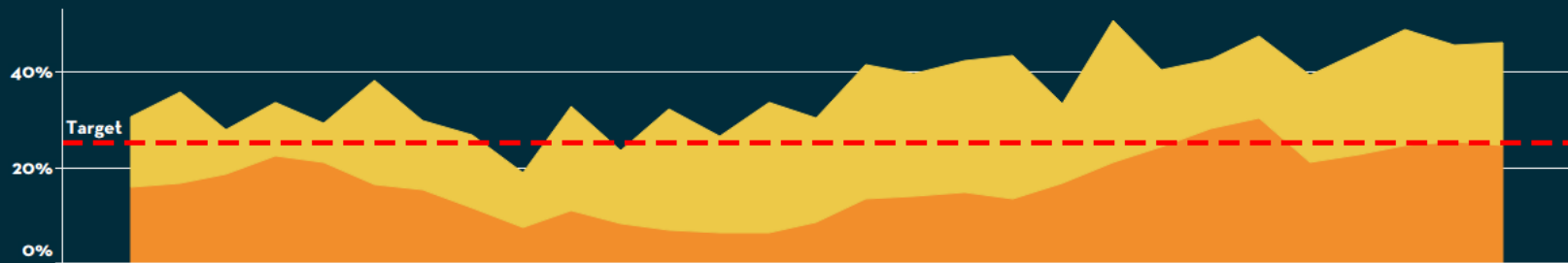
FEMS: Fleet Availability vs. Target



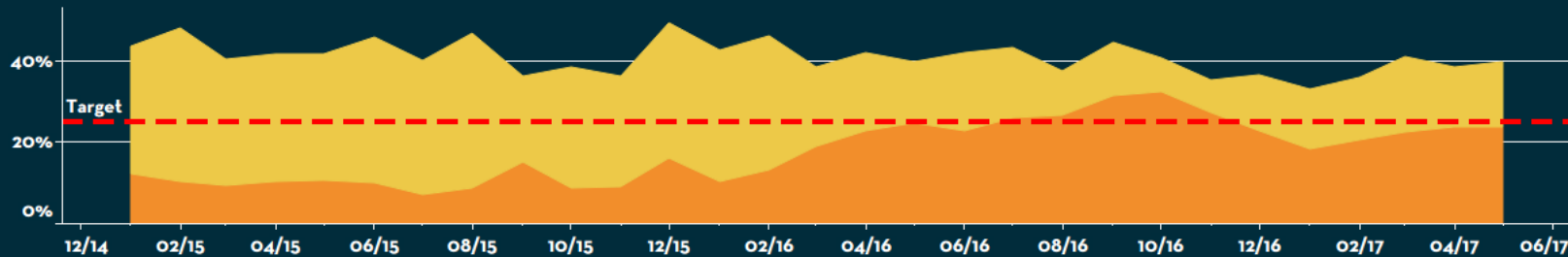
Ambulances



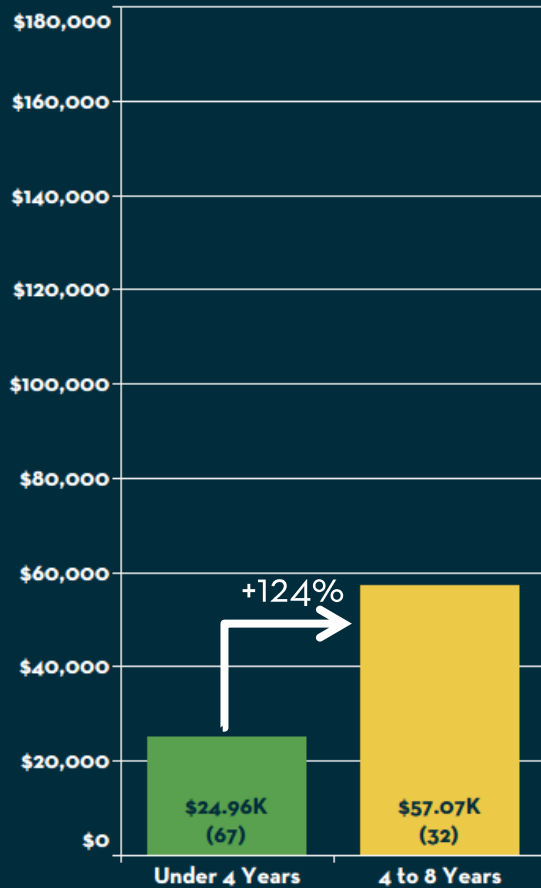
Ladders



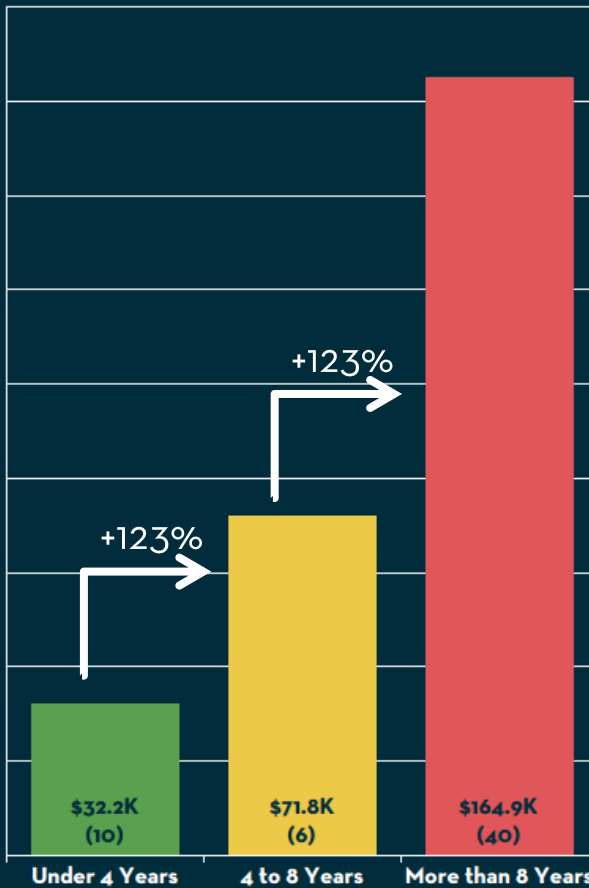
Pumpers



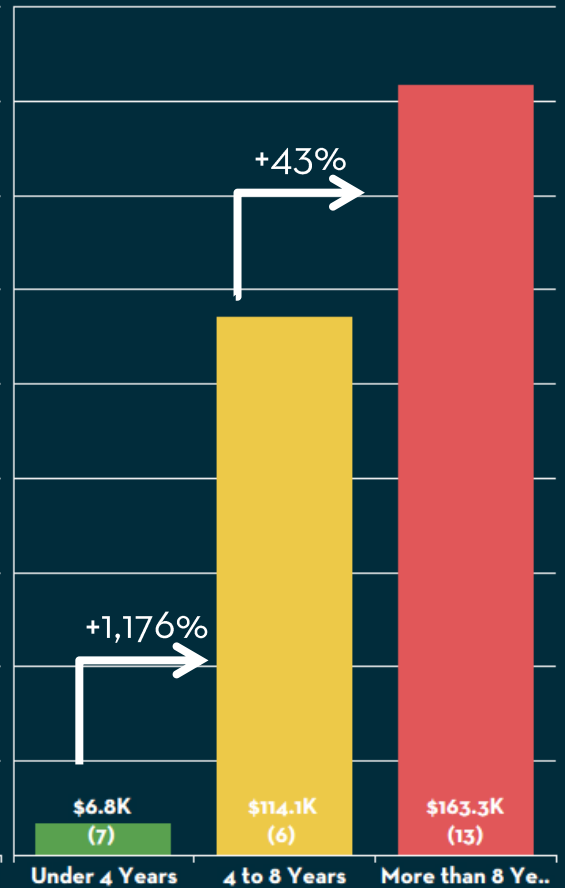
Ambulances



Pumpers

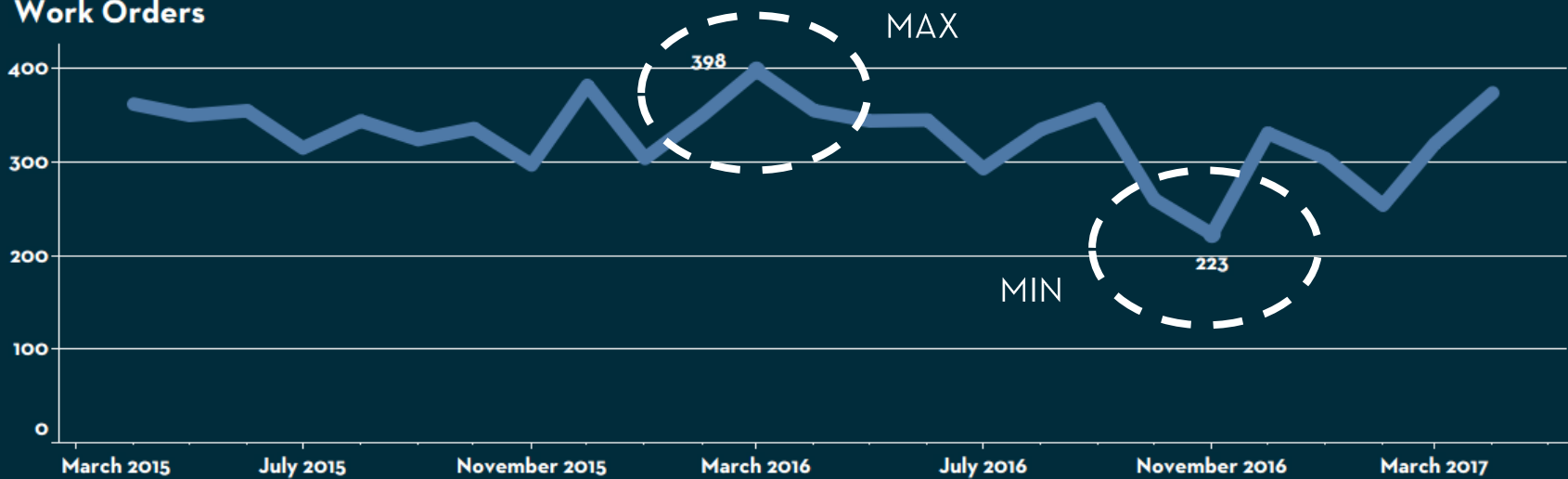


Ladders

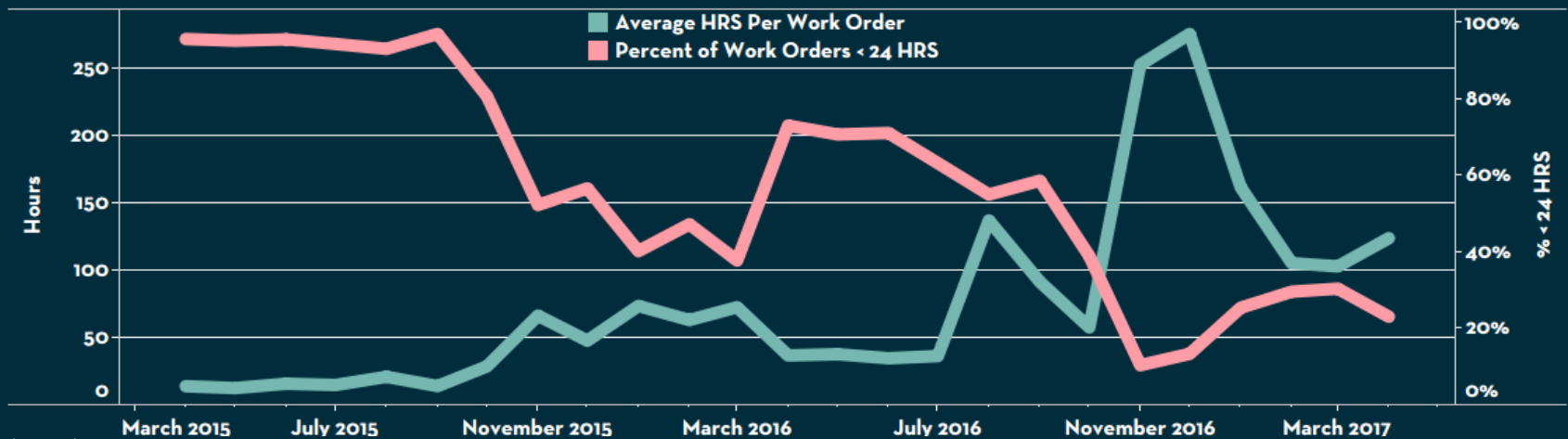


FEMS: Average Total Maintenance Costs

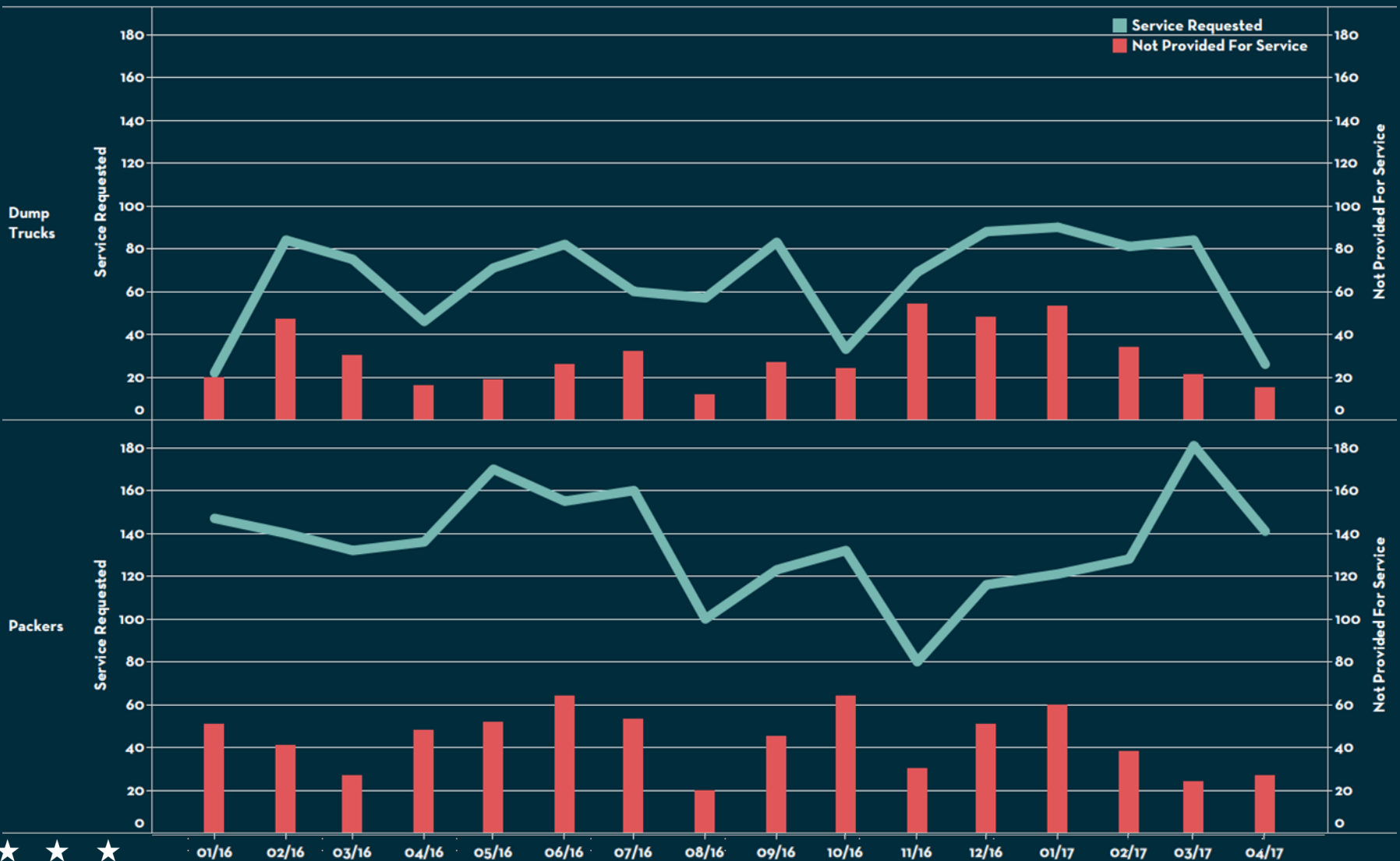
Work Orders



Turnaround Time Stats

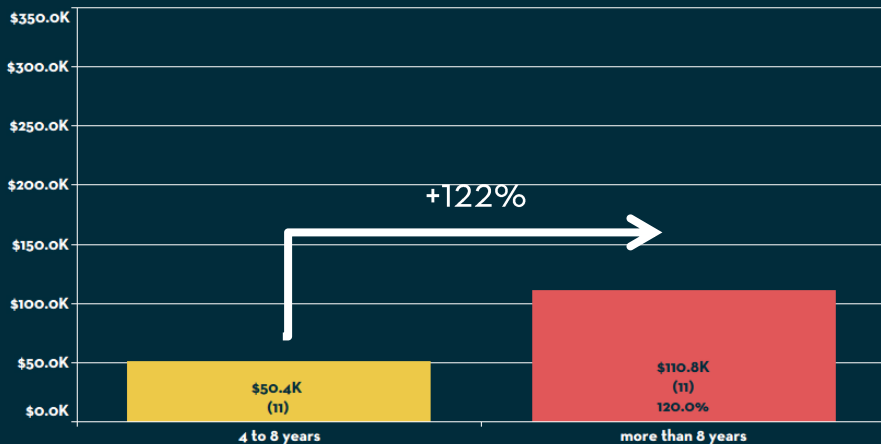


DPW: In-house Shop Performance

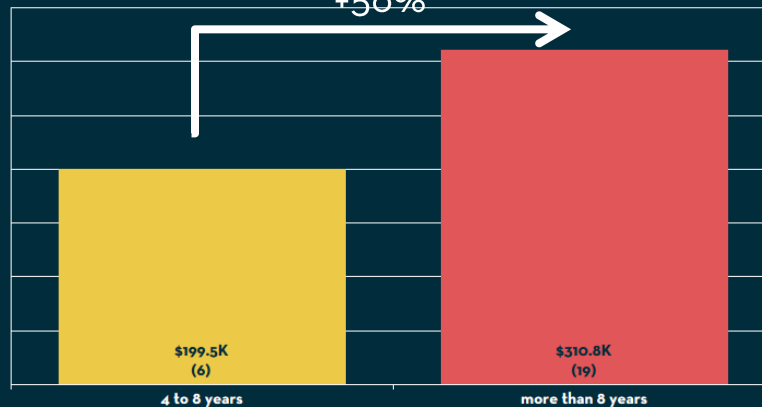


DPW Heavy Fleet: Preventative Maintenance (Outsourced)

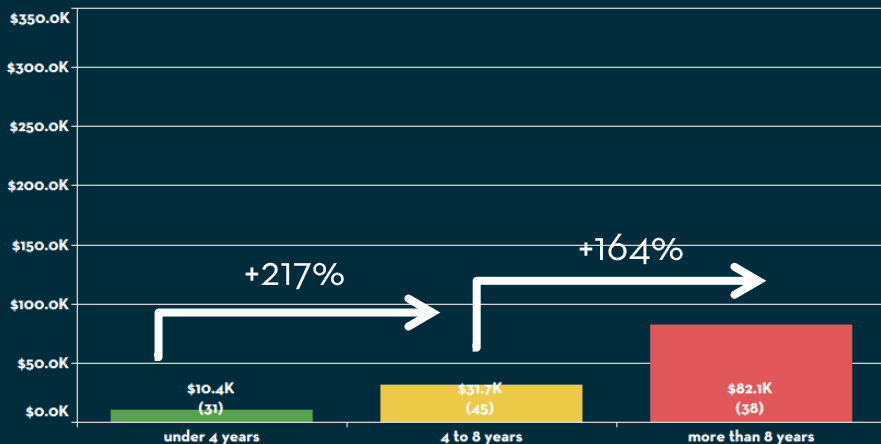
10-Wheel Dump w/Plow



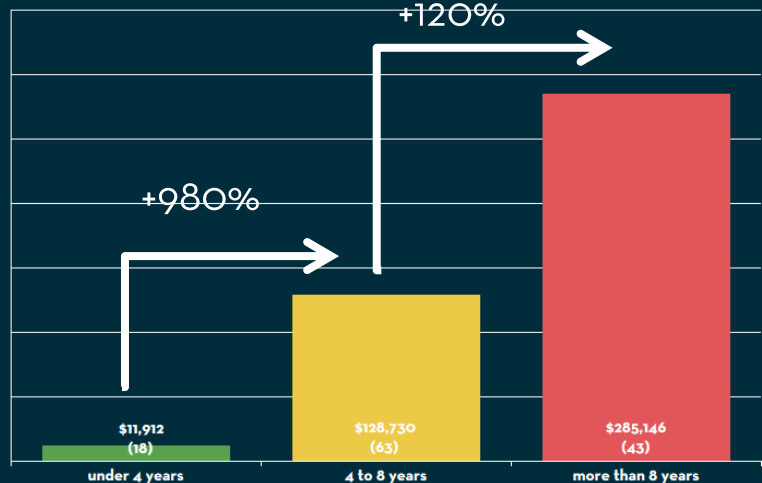
3-Wheel Street Sweeper

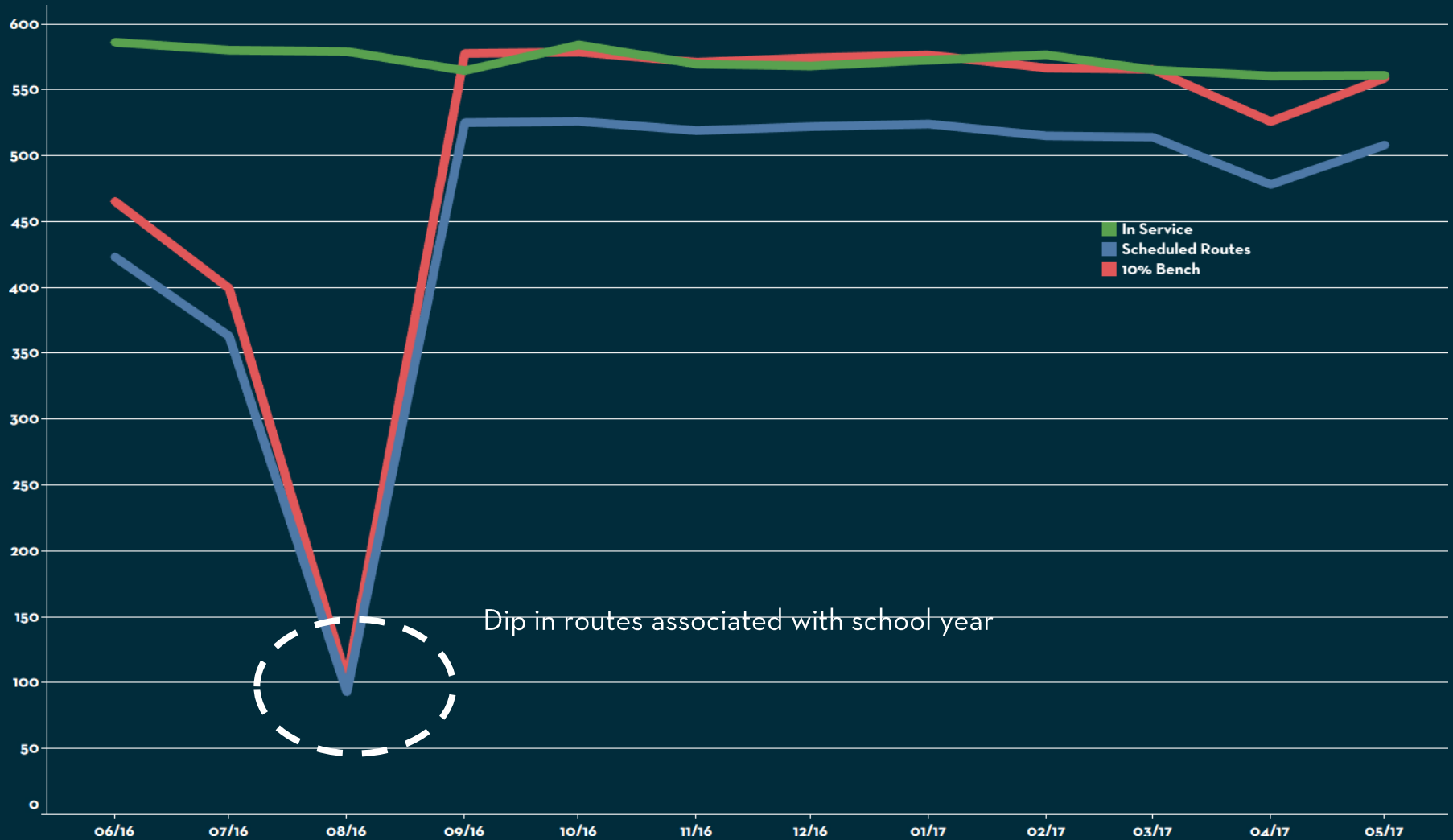


6-Wheel Dump w/Plow

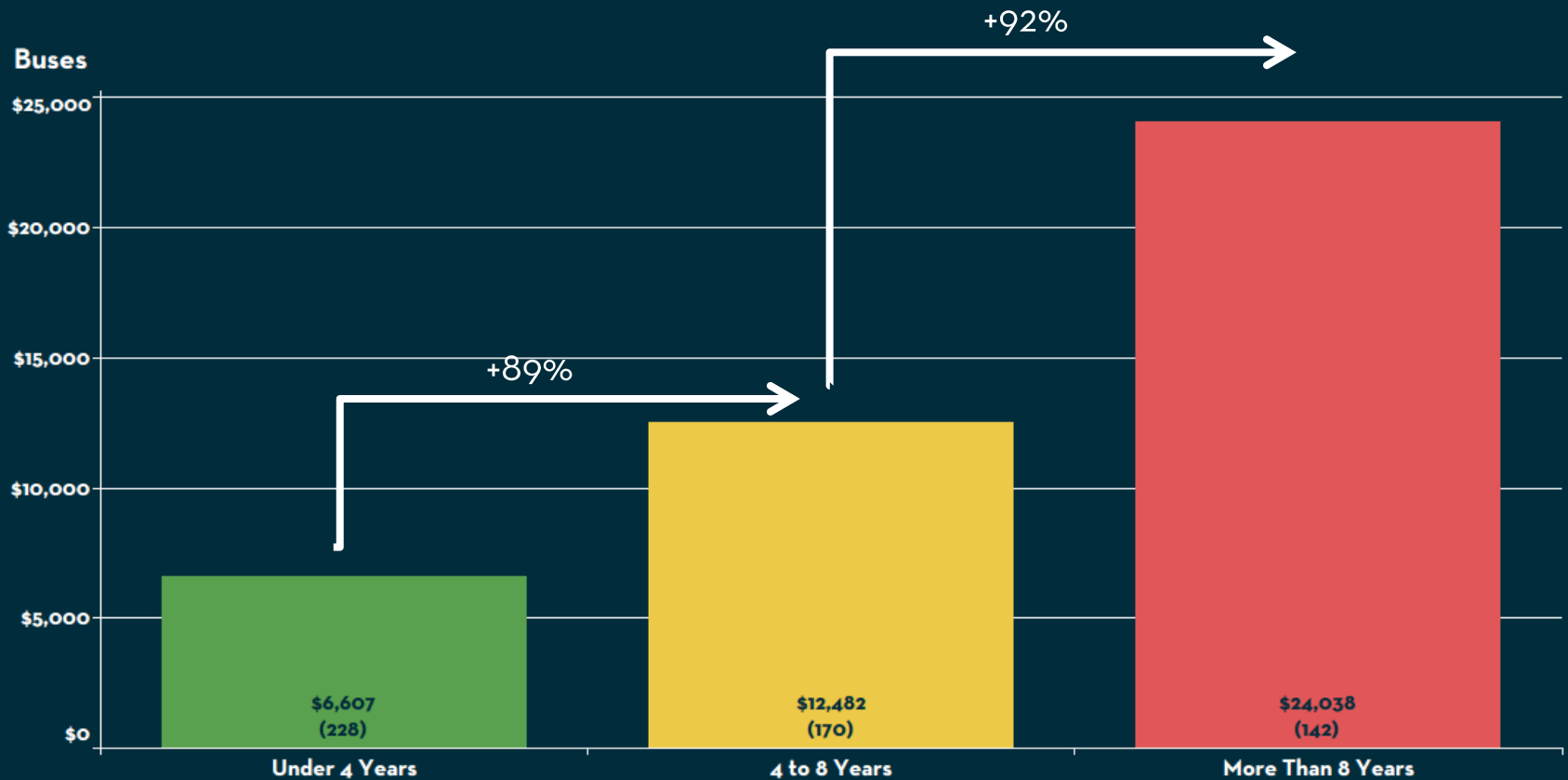


Refuse Trucks





OSSE: Fleet In Service vs Target

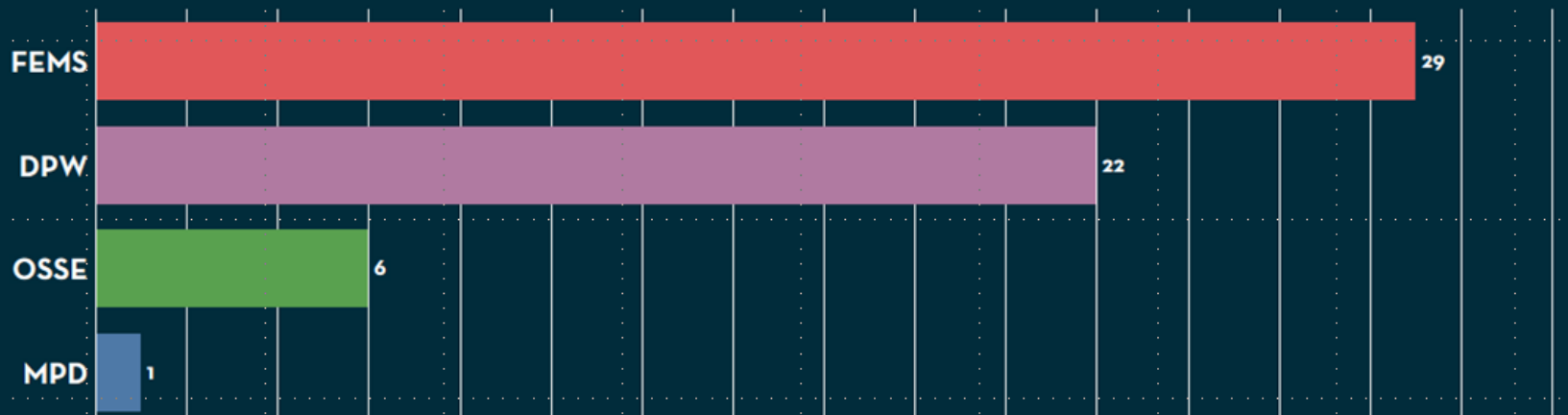


OSSE: Average Total Maintenance Costs

Maintenance Vendors

Vendors used by multiple agencies:

- ◆ K. Neal
- ◆ R&S
- ◆ Tony's
- ◆ Parts Authority
- ◆ Fleet Pro



*MPD vendor uses multiple subs

Hiring Information

	# Hires	# Active	# Separated	% Separated
FY15	9	5	4	44.4%
FY16	10	8	2	20.0%
FY17	2	2	0	0.0%
Total	21	15	6	28.5%

Separation Information

	# Sep	# Voluntary	Avg. Tenure	% Voluntary
FY15	9	4	7.8	44.4%
FY16	8	2	3.4	25.0%
FY17	4	1	6.3	25.0%
Total	21	7	5.8	33.3%



Challenges

Overarching:

- Holding vendors accountable; turnaround time and quality of work
- Hiring, training, and turnover of qualified mechanics

MPD:

- Ensuring 93% marked cruiser availability across all Police Districts, every day (*MPD is updating contracting language to address this challenge*)

FEMS:

- Apparatus downtime (combination of vendors/manufacturers and FEMS facility downtime)
- Maintenance facility issues

DPW:

- Lack of robust performance based contracts w/vendors (*DPW is working to improve contracts; transition to more performance based*)
- Completing light vehicle PMs in a timely manner (also challenges w/work order data capture)
- Delivery of heavy vehicles for scheduled maintenance appointment (root cause may be service delivery being prioritized over maintenance)

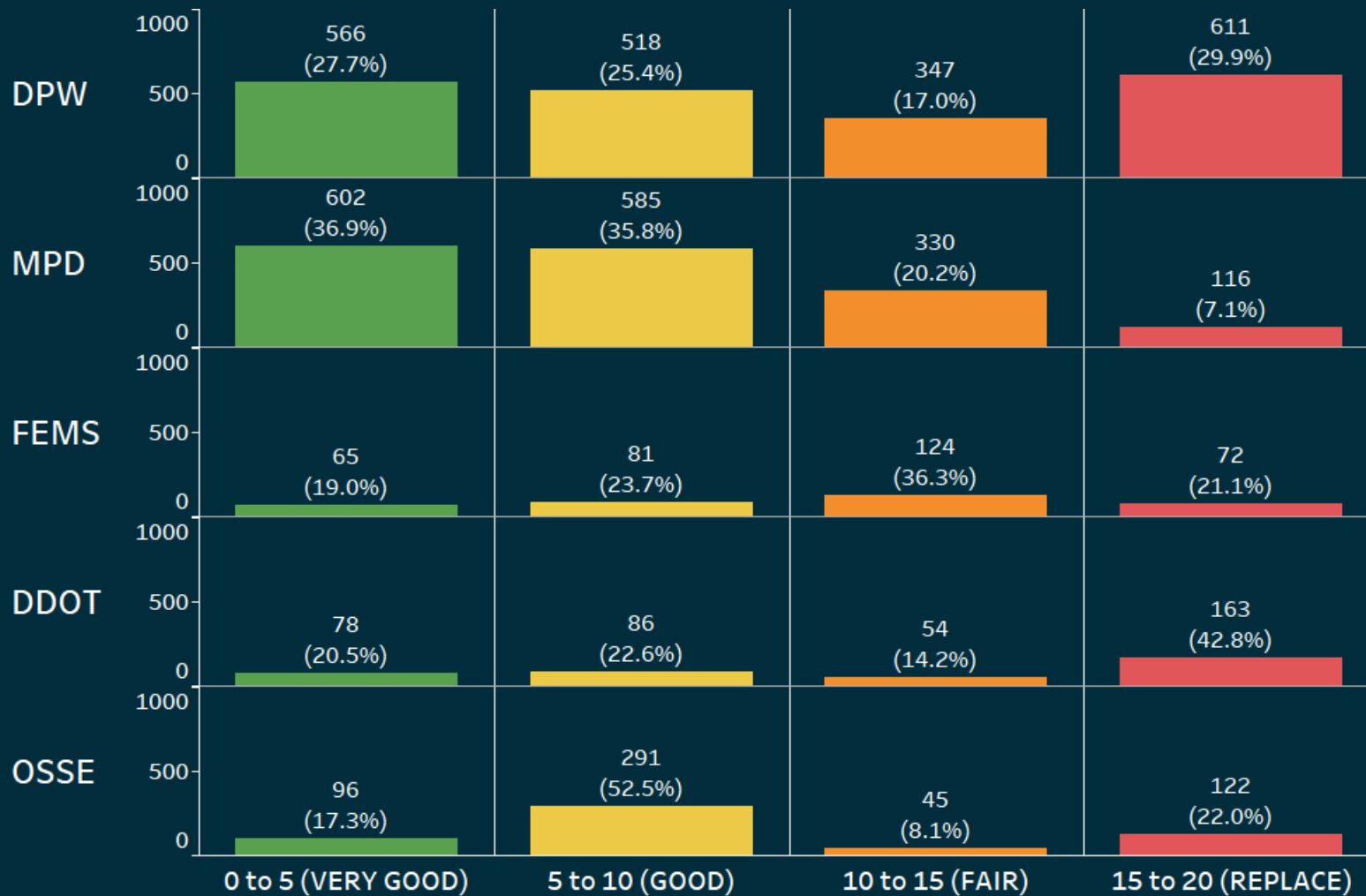
OSSE:

- On-site maintenance challenges (environmental restrictions)
- Limited maintenance related performance indicators in FASTER used by OSSE

Recommendations

- District-wide approach to solving mechanic hiring, training, and retention issues
 - Explore expanding DPW's use of the LEAP program or establishing a District-wide mechanic academy
- Establish and deploy maintenance related KPIs in a more robust fashion, e.g.:
 - In service and downtime measures
 - PM and reactionary maintenance appointment TAT targets
 - Quality assurance and maintenance rework measures
- Increased use of performance based contracting to hold vendors accountable
 - Leverage MPD's experience; explore contract clawback provisions for subpar performance
- Deep dive into DPW light vehicle maintenance operation
 - Business process review; data review and clean
- Continued agency coordination w/OPM and Capital Asset Replacement Scheduling System (CARSS) team to clean FASTER environments and improve condition score calculation

Appendix



Condition of Fleet by Agency

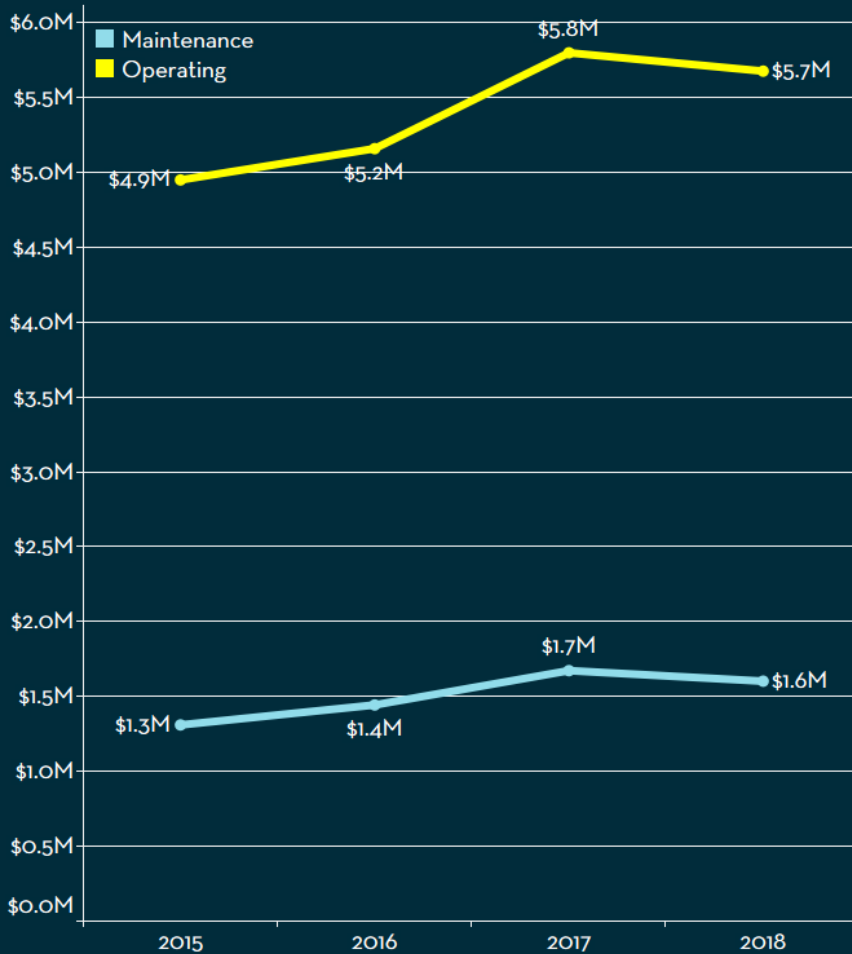
CARSS Condition Scores

There are three factors that make up total points:

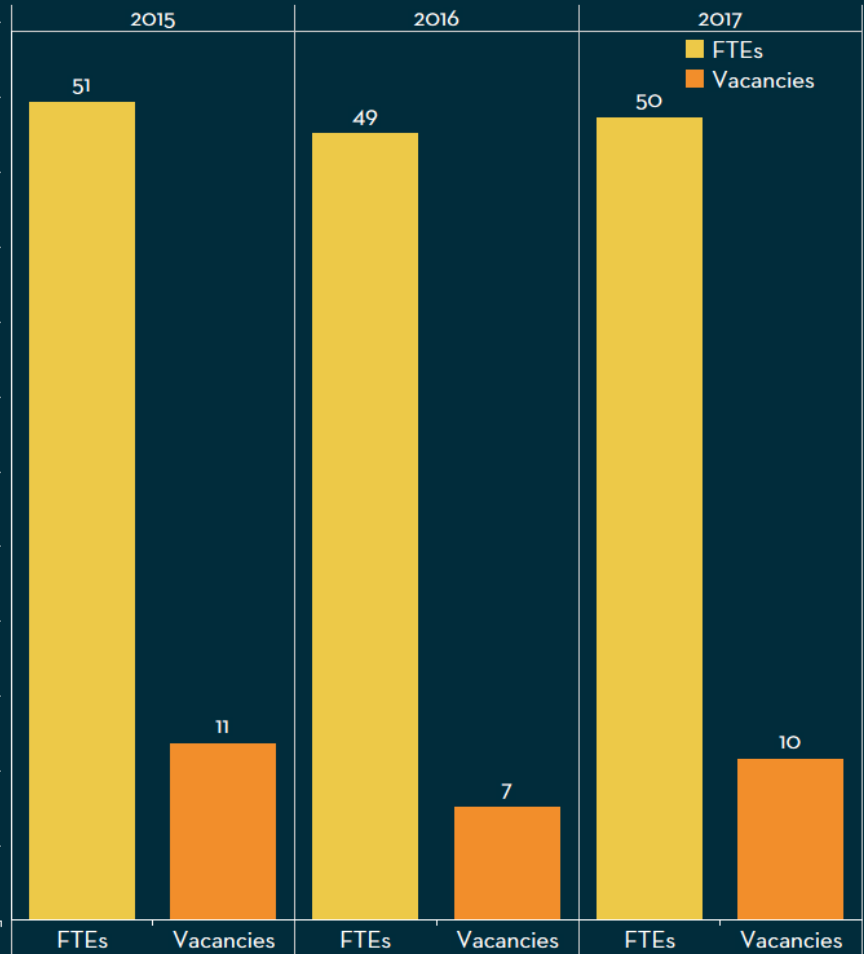
1. Maintenance Cost Life-To-Date (LTD):
 - Maintenance Cost LTD is weighed double, on a scale of 0-10, and hits its highest level (10) when the maintenance cost LTD equals the original purchase price. The points are determined by the percentage of the current LTD maintenance divided by the original purchase price. The points for this factor are double to identify “lemons” or high maintenance equipment.
2. Life-to-Date Mileage or Hours:
 - LTD meters are rated on a scale of 0-5. The points are determined by the percentage of the current LTD meter divided by the expected meter life.
3. Expended Life In Months:
 - Life in months is rated on a scale of 0-5. The points are determined by the percentage of the current life in months divided by the useful life in months.

Total Point Value	The higher the number, the nearer the asset is to being replaced	Total points of the 15 Point Scale include Meter + Maintenance + Age + Condition factor
Highest Meter	Points assigned due to the meter reading	$(\text{AssetMeter.Actual} / \text{AssetMeter.MeterLifeExpect}) * 5.0$
Age	Points assigned due to age	$(\text{CurrentDate} - \text{InServiceDate}) / \text{Useful Life months} * 5.0$
Remaining Life	(Useful Life In Months) minus (Current Life In Months)	$((15.0 \text{ minus (Total Points)}) \text{ divided by } 15.0) * (\text{Useful Life In Months})$
Replacement Cost	AssetAcquire. AcquireCapitalizedCost X (1 + (AssetReplace.InflationRate/12)) raised to the power of AssetReplace.DeprecLifeExpect	AssetAcquire. AcquireCapitalizedCost X (1 + (AssetReplace.InflationRate/12)) raised to the power of (Current Life in Months + Adjusted Remaining Life

FEMS Maintenance and Operating Budget (FY15-FY18)



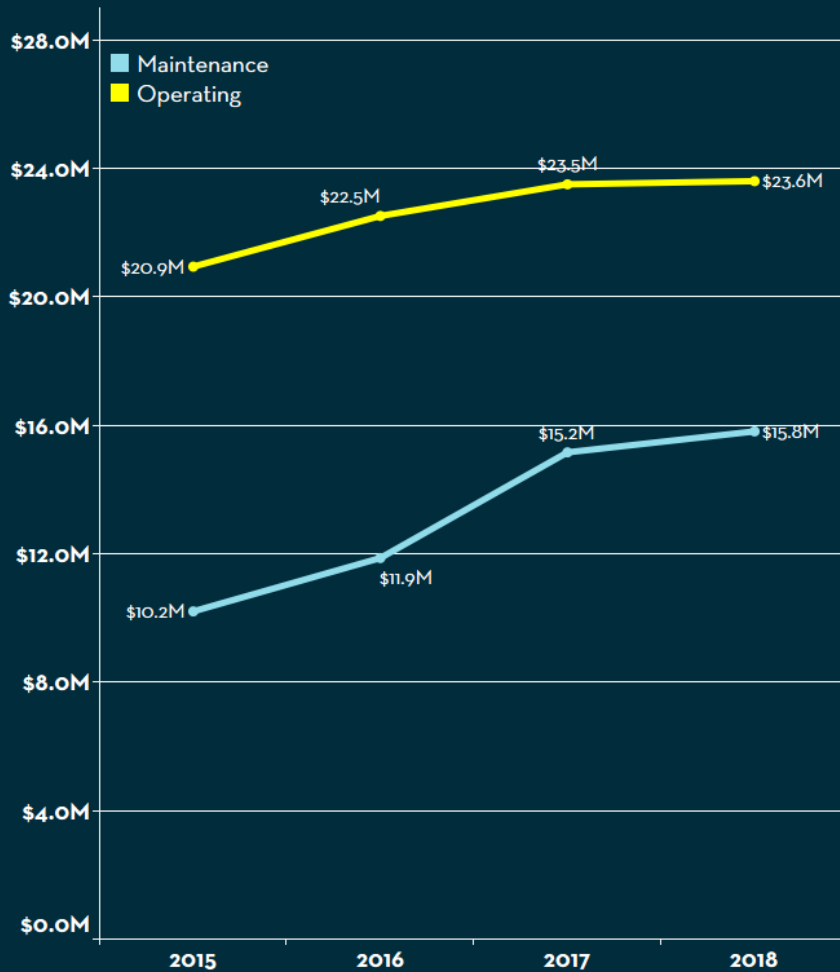
FEMS Mechanic Staffing (FY15-FY17)



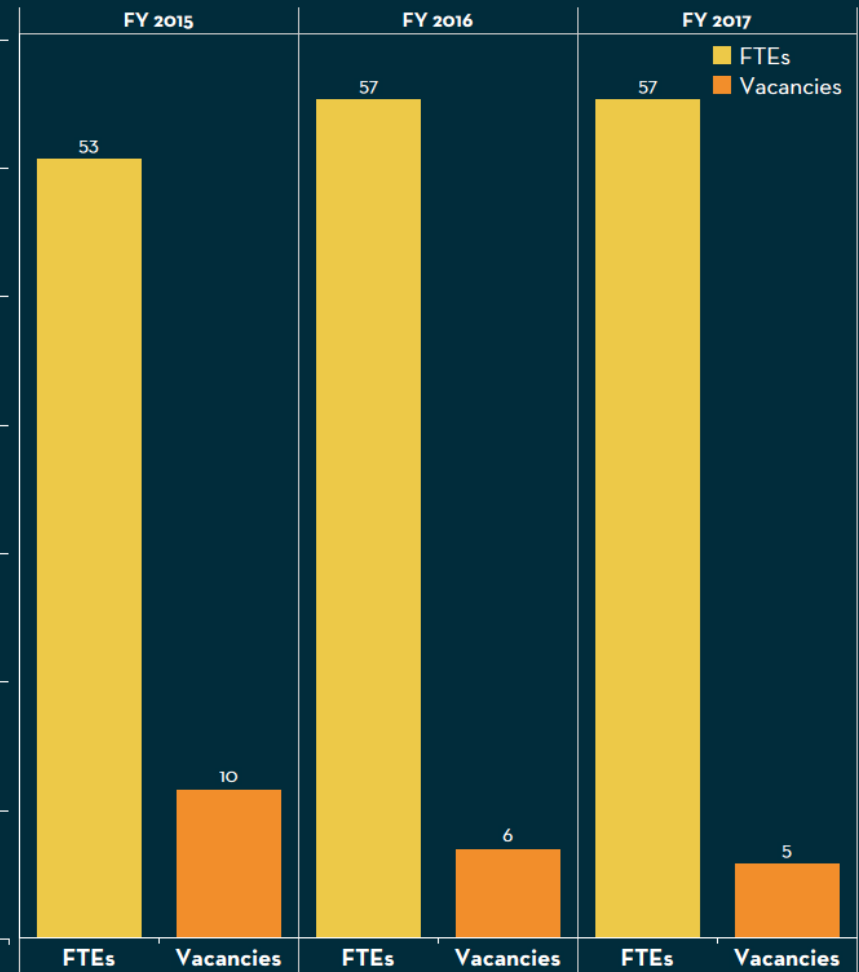
FEMS: Maintenance Operation & Budget*

*(FEMS maintenance work is done via a combination of in-house and contracted out maintenance)

DPW Maintenance and Operating Budget (FY15-FY18)



DPW Mechanic Staffing (FY15-FY17)



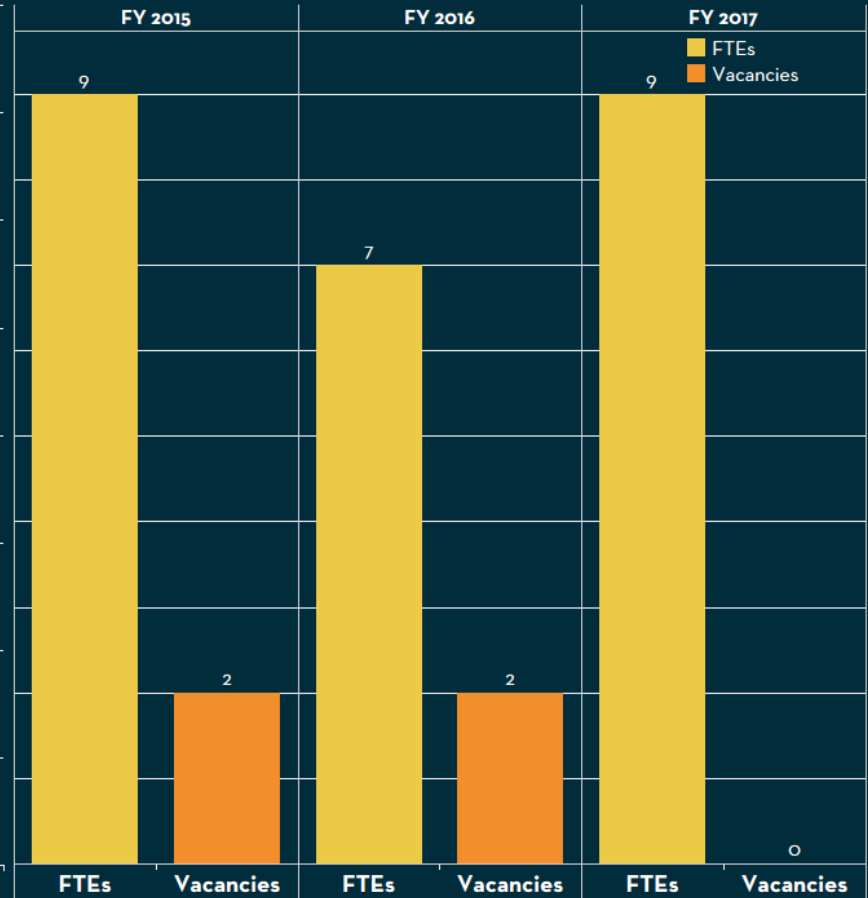
DPW: Operation & Budget*

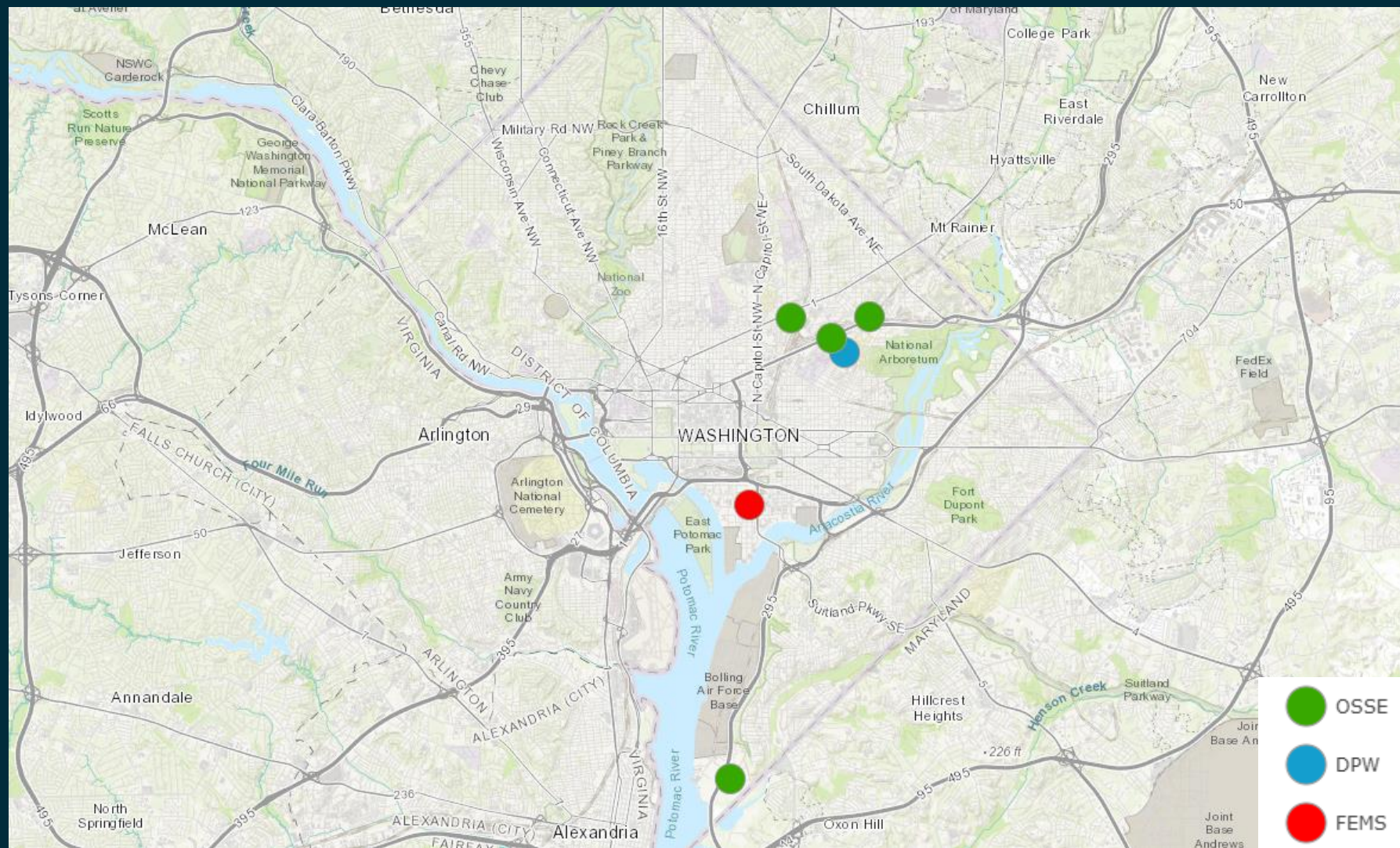
*(DPW maintenance work is done via a combination of in-house and contracted out maintenance)

OSSE Maintenance and Operating Budget (FY15-FY18)



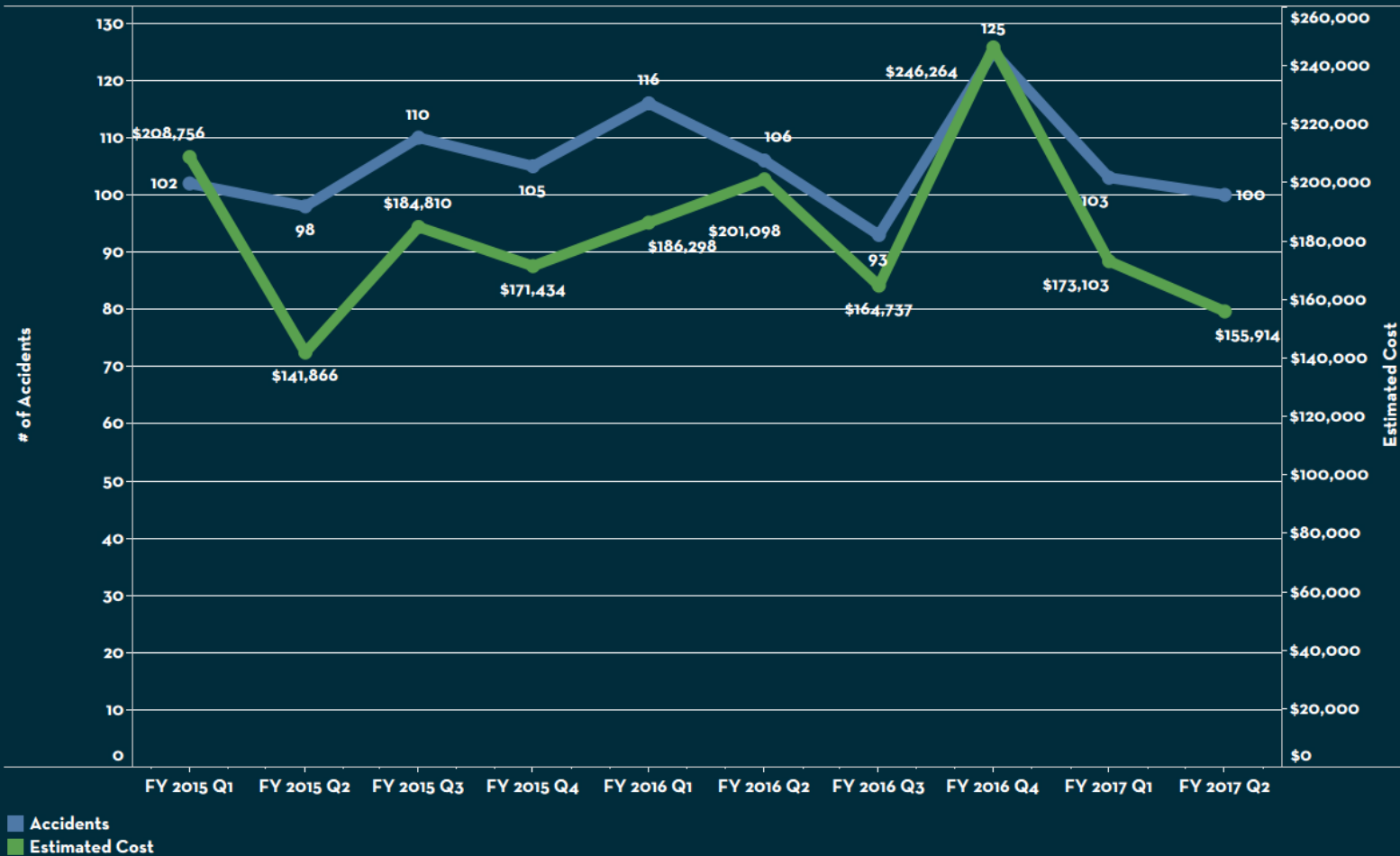
OSSE Mechanic Staffing (FY15-FY17)



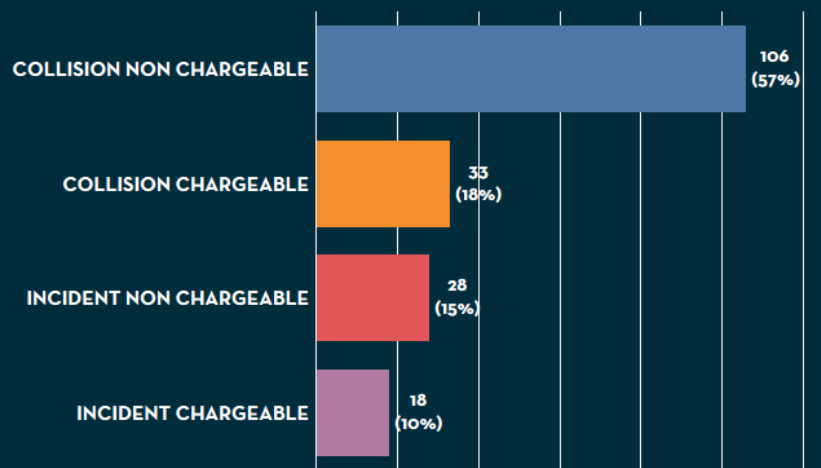


Maintenance Facilities

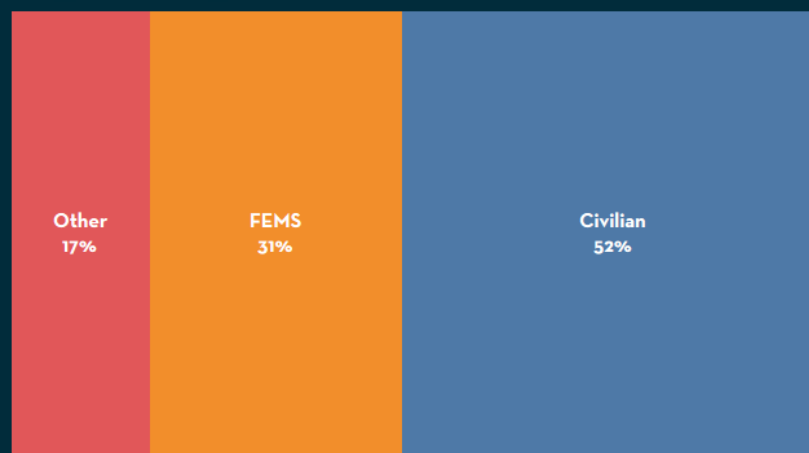
Accidents and Cost



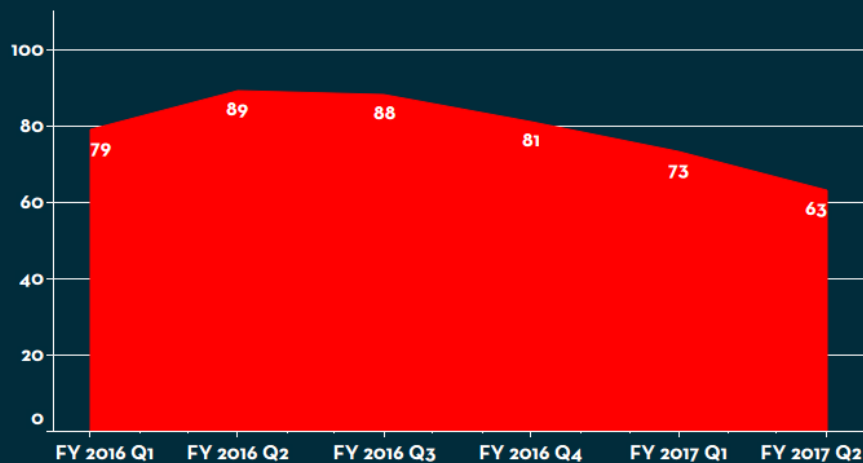
Accident Classification (FY17)



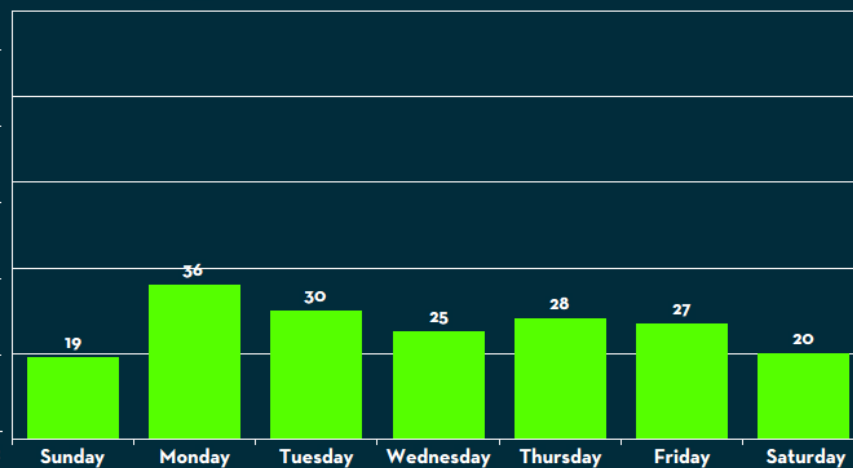
Responsible Party (FY17)



Number of Accidents



Accidents by Day of the Week (FY17)



FEMS: Accident Dashboard

Hiring Information

	# Hires	# Active	# Separated	% Separated
FY15	3	1	2	66.6%
FY16	2	1	1	50.0%
FY17	0	0	0	
Total	5	2	3	60.0%

Separation Information

	# Sep	# Voluntary	Avg. Tenure	% Voluntary
FY15	5	1	10.8	20.0%
FY16	2	1	0.4	50.0%
FY17	2	1	7.7	50.0%
Total	9	3	6.3	33.3%

Mechanic HR STATs (FEMS)

Hiring Information

	# Hires	# Active	# Separated	% Separated
FY15	4	2	2	50.0%
FY16	8	7	1	12.5%
FY17	0	0	0	0.0%
Total	12	9	3	25.0%

Separation Information

	# Sep	# Voluntary	Avg. Tenure	% Voluntary
FY15	3	2	4.9	66.7%
FY16	6	1	4.4	16.7%
FY17	1	0	9.7	0.0%
Total	10	3	6.3	30.0%

Mechanic HR STATs (DPW)

Hiring Information

	# Hires	# Active	# Separated	% Separated
FY15	2	2	0	0.0%
FY16	0	0	0	0.0%
FY17	2	2	0	0.0%
Total	4	4	0	0.0%

Separation Information

	# Sep	# Voluntary	Avg. Tenure	% Voluntary
FY15	1	1	1.32	100.0%
FY16	NA	NA	NA	NA
FY17	1	0	0.25	0.0%
Total	2	1	1.57	50.0%

Mechanic HR STATs (OSEE)

FEMS: Replacement Schedule / Avg. Cost of Owned Fleet

Apparatus / Vehicle Type	Replacement Schedule*
Command vehicles	No more than 6 years
Ambulances	No more than 3 years for frontline, plus additional 6 years for reserve (9 years total)
Engines	No more than 7 years for frontline plus additional 9 for reserve (16 years total)
Ladders	No more than 7 years for frontline plus additional 8 for reserve (15 years total)
Rescue Squads	No more than 7 years for frontline plus additional 8 for reserve (15 years total)

*FEMS adheres to the BDA Global recommended replacement plan

Apparatus / Vehicle Type	Avg. Acquisition Cost
Command Vehicles	\$95,333.33
Ambulance	\$226,796.21
Engine	\$434,448.23
Ladder Truck	\$780,741.91

Note: Included in the average cost are used/refurbished vehicles. A typical new Ambulance is ~\$320,000; a new Engine is ~\$750,000; and a new Ladder is ~\$1,500,000.

MPD: Replacement Schedule / Avg. Cost of Fleet

Vehicle Type	Replacement Schedule
Marked Patrol Units	5 years and/or 120,000 miles
Marked Non-Patrol and Take Home Vehicles	6 years and/or 120,000 miles
Marked Transport Vans	5 years and/or 120,000 miles
Unmarked Sedans	8 years and/or 120,000 miles
Support Vehicles	8-10 years and/or 120,000 miles

Vehicle Description	Avg. Acquisition Cost
Cmd Bus	\$448,894.67
HD FLHTPI	\$26,515.78
HD Scooters	\$9,776.90
Honda Scooters	\$4,122.26
Marked Patrol	\$26,256.13
Marked Van Prisoner Transport	\$23,150.05
Support	\$26,534.66
Unmarked	\$18,808.12

DPW: Replacement Plan

DPW evaluates numerous factors to determine the need for fleet replacements, including:

1. Life-to-date repair and maintenance costs
2. Trade-offs of capital vs. operating expenditures
3. Alternative financing methods, such as leasing

Phase	Details
1	<p>Review fleet inventory data:</p> <ul style="list-style-type: none"> • Identify units exceeding age, mileage/meter, and life-to-date maintenance cost guidelines • Note units exceeding at least two of the criteria or that have unusual circumstances • Receive input from fleet users for additional vehicles to evaluate
2	<ul style="list-style-type: none"> • Conduct physical condition assessments • Estimate total costs to maintain each unit for another year • Calculate a condition index for each unit and prioritize units for replacement or maintenance for same year or out year
3	<ul style="list-style-type: none"> • Reach agreement with agency on which vehicles will be replaced • Prepare formal list for Directors approval

OSSE: Replacement Plan / Approved Fleet Purchases

Several key factors are considered:

- Age, mileage of bus
- Amount of money for repairs put into bus since acquiring it
- Overall bus performance
- Gas vs. diesel fuel issues

General rules:

- If the cost to repair a bus is over \$25,000 (about half what the bus is worth)
- If a bus is over 7 years old, and cost to repair is \$5,000-\$10,000, examine cost history of repairs—if they total over \$25,000, consider retiring
- If a bus is over 7 years old and has consistent performance problems

FEMS: Daily Apparatus Requirements

Apparatus	Requirements
Engines / Pumpers	33 Front line Engines <ul style="list-style-type: none"> • 2 Training Academy Engines • 6 Water Supply Engines • 12 Battalion Ready Reserve Engines • 10 Warehouse Reserve Engines TOTAL: 63 Total Engines
Ambulances	39 Front Line Ambulances <ul style="list-style-type: none"> • 1 Training Academy Ambulance • 10 EMOP/Special Event Ambulances • 38 Reserve Ambulances TOTAL: 88 Total Ambulances
Ladder Truckers	16 Front Line Ladder Trucks 1 Training Academy Ladder Truck 8 Reserve Ladder Trucks 1 Battalion Reserve TOTAL: 26 Total Ladder Trucks
Rescue Squads	3 Front Line Rescue Squads <ul style="list-style-type: none"> • 2 Ready Reserve Squads TOTAL: 5 Total Rescue Squads