



# Hawaii Fire Department Fleet Replacement Plan

Kazuo Todd, Fire Chief

*\*This document does not currently cover boats or helicopters.*

**Document is Valid for FY25/26. Expiration July 1<sup>st</sup>, 2026.**

**Total estimated annual cost of replacement:**

Based on the replacement time frame, expected pricing, current estimates for vehicle fleet replacement are \$5,179,625 a year as of 2025. The large increase in total cost from last year's document is due to addition of EMS, Ocean Safety, and support services vehicle replacement tracking. Documentation of all calculations are included within.

**HFD Standard Complement: What is our deployment model?**

Exempting specialty vehicles not covered by this document, in general the Hawaii Fire Department has three models of deployment. One is for Career Fire Stations, one is for Specialty Career Stations, and the last is for Volunteer Fire Stations.

**Model C:** Three Frontline Fire Vehicles maintained at less than 15 years in age

- (1) Engine (or Aerial Ladder) (Type 1, 4+ daily staff ideally)
- (1) Brush Truck (Type 6+, normally unstaffed)
- (1) Light Duty Vehicle (4x4 truck, unstaffed)
- (1) Tanker (not all stations, placed in districts without water supply, staffed with 1)

**Model C Special:** Three Frontline Fire Vehicles maintained at less than 15 years in age

- (1) Engine (or Aerial Ladder) (Type 1, unstaffed, Specialty Vehicle placed O/C if used)
- (1) Specialty Vehicle (Hazmat Truck, Heavy Rescue + Light Rescue, 5+ daily staff ideally)
- (1) Light Duty Vehicle (usually 4x4 Truck)

**Model V:** Two Frontline Fire Vehicles maintained at less than 25 years in age

- (1) Tanker (Type 2 Tactical Tanker)
- (1) Brush Truck (Type 6+)

Plus Vehicles: Stations may also be equipped with the following:

- (1) BC Command Vehicle (used by Battalion Chief)
- (1) Fuel Truck (unstaffed)
- (1) Boat (unstaffed) *(not covered in this document)*
- (1) Helicopter (staffed by pilot) *(not covered in this document)*
- Trailers (Hazmat, Mass Casualty, Incident Command, Boat, Flatbed, SCBA) *(not covered)*

**Scheduled Replacement Time: 15 Year or 25 Years.**

Fire Department vehicles should not be considered similarly to most other Departmental or private vehicles. The public depends on their emergency responders, when called, to arrive on the scene in a timely manner with the appropriate resources and equipment.

The applicable standards used by the fire service relating to fire apparatus are the National Fire Protection association (NFPA) 1901. According to the NFPA 1901 Standard (2016 Ed.) It is highly recommended to replace frontline fire apparatus at the 15 year point. Each apparatus faces different conditions, some will be in poor condition after 8-10 years of heavy use, and others may serve dependably up to 20 years. On average a replacement plan for fire apparatus vehicles at 15 years will allow fire departments to best serve the communities that rely on them.

It is understood that there are fiscal constraints affecting Hawaii County's ability to purchase equipment and vehicles. As such the Hawaii Fire Department's vehicle replacement plan is based off of a 15 year replacement plan for career stations vehicles, and a 25 year replacement plan for volunteer stations vehicles. This allows us to shift well maintained frontline apparatus past their 15 year NFPA recommended life span into our volunteer fleet to supplement our response.

**Next Fiscal Year (FY25-26) Order List:**

Apparatus Class	Call Sign	Apparatus Type	M/M	Year	Mileage	Assigned	Division/Section	Actual Order Year	Funding Source
Specialty Veh	HZ21	Hazmat	Pierce	2005	58530	Station 21	Operations	Next FY	County
Fire Engine	E04	Type 1 Engine	Pierce	2012	36810	Station 04	Operations	Next FY	County
Fire Engine	P02	Type 1 Engine	Pierce		0	Training	Operations	Next FY	County
Brush Truck	BR06	Type 6 Wildla	Ford F550	2008	68694	Station 6	Operations	Next FY	County
Brush Truck	BR16B	Type 6 Wildla	Chevy 30	1986	128030	Station 16	Operations	Next FY	VFA
Light Duty Veh	X11	Truck	Ford F250	2002	160293	Station 11	Operations	Next FY	County
Light Duty Veh	X06	Truck	Dodge ram 250	1992	46819	Station 6	Operations	Next FY	County
Ambulance	M09	Ambulance	Ford / Braun nd	2019	49456	Station 9	Support Services	Next FY	State
Ambulance	M14	Ambulance	Ford / Braun nd	2021	87755	Station 14	Support Services	Next FY	State
Ambulance	M03	Ambulance	Ford / Braun nd	2022	69912	Station 3	Support Services	Next FY	State
Ambulance	M08	Ambulance	Ford / Braun nd	2022	46305	Station 8	Support Services	Next FY	State
EMS Support Ve	EMS Capt	SUV	Ford Expedition	2019	55524	EMS	Support Services	Next FY	State
Support Veh	Mech 2	Truck	Ford F350 4x4	1989	293278	Mechanic	Auxillary Services	Next FY	State
Support Veh	INS24	SUV	Ford Expedition	2005	282902	Insp 2-4	Prevention	Next FY	County
Support Veh	INS23	SUV	Ford Expedition	2005	253543	Insp 2-3	Prevention	Next FY	County
Support Veh	Mech 3	Truck	Chevy K3500	1994	100392	Mechanic	Auxillary Services	Next FY	County
Light Duty Veh	OS3-2	Pickup Truck	Toyota Tacoma		0	Hilo WSO	Ocean Safety	Next FY	County
Light Duty Veh	LG07	Pickup Truck	Ford F250	2002	348404	Pohoiki Td	Ocean Safety	Next FY	County
Light Duty Veh	LG08	Pickup Truck	Ford Ranger	2008	81216	Punaluu T	Ocean Safety	Next FY	County
Support Veh	IT	SUV	Ford Explorer	2005	314380	IT	Admin	Next FY	County

Fire Operations line item 010.221.6221.02.115 FY25/26 Estimate \$143,226: **\$0**

- FY29/30 Hazmat 21 and Engine 4. Lease purchase. Estimated arrival in 2030.

Fire Operations line item 010.221.6221.06.449 FY25/26 Estimate \$1,891,677: **(\$51,677)**

- Pumper 02 (Stock Truck) estimated cost \$950,000
- Brush truck 06 estimated cost \$370,000
- X11 and X06 estimated cost \$200,000
- Mechanic Truck (Mech 3) estimated cost \$170,000
- Light SUVs (3) for Inspector 2-3, Lifeguard 07, and IT, estimated cost \$150,000

Fire Prevention line item 010.221.6222.06.449 FY25/26 Estimate \$40,000: **(\$10,000)**

- Inspector 2-4 Light SUV estimated cost \$50,000

Auxiliary Services line item 010.221.6223.06.449 FY25/26 Estimate \$50,000: **\$0**

- Forklift estimated cost \$50,000

Ems line item 010.221.6227.06.449 FY25/26 Estimate \$1,678,800: **\$0**

- Medic 09, 14, 03, 08 estimated cost \$1,388,000
- Mechanic Truck (Mech 2) estimated cost \$170,000
- EMS SUV estimated cost \$120,000

Ocean Safety line item 010.221.6228.06.449 FY25/26 Estimate \$75,000: **(\$25,000)**

- OS Lieutenant 2 Light SUV estimated cost \$50,000
- Lifeguard 08 Light SUV estimated cost \$50,000

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

Vehicle On Order List (IFB Issued):

Apparatus Class	Call Sign	Apparatus Type	M/M	Year	Cond	Mileage	Assigned	Division/Section	Actual Order Year	Funding Source
Brush Truck	E11A	Type 5 Wildland	International	1988	IV	170005	Station 11A	Operations	2023	CDBG 23/24
Brush Truck	BR11D	Type 6 Wildland	Chevy	1988	IV	66413	Station 11D	Operations	2023	CDBG 23/24
Brush Truck	BR08A	Type 5 Wildland	West Mark	1990	IV	45160	Station 8A	Operations	2023	VFA 23/24
Brush Truck	BR01A	Type 6 Wildland	Chevrolet	1989	IV	89030	Station 1A	Operations	2023	VFA 23/24
Brush Truck	BR11C	Type 4 Wildland	Ford	1995	IV	177466	Station 11C	Operations	2023	CDBG 23/24
Specialty Veh	HZ04	Hazmat	Marion	1997	IV	80038	Station 04	Operations	2024	County
Fire Engine	E19	Type 1 Engine	Pierce	2006	IV	81598	Station 19	Operations	2024	County
Fire Engine	E10	Type 1 Engine	Pierce	2012	IV	99898	Station 10	Operations	2024	County
Brush Truck	BR17	Type 6 Wildland	Ford F350	1995	IV	71092	Station 17	Operations	2024	CDBG-MIT
Brush Truck	BR05C	Type 6 Wildland	International	1990	IV	80643	Station 5C	Operations	2024	CDBG 24/25
Brush Truck	BR08	Type 6 Wildland	Ford F550	2001	IV	44956	Station 8	Operations	2024	County
Brush Truck	BR11	Type 6 Wildland	Ford / KME	2015	II	2503	Station 11	Operations	2024	CDBG-MIT
Brush Truck	BR05	Type 6 Wildland	Ford F550 / Rose	2020	I	13931	Station 05	Operations	2024	CDBG-MIT
Fuel Truck	FT14	350 Gal Avgas Refuele	Ford	1993	IV	200000	Station 14	Operations	2024	Sayres
Fuel Truck	FT02	350 Gal Avgas Refuele	Ford F350	1999	IV	78693	Station 02	Operations	2024	Sayres
Tow Vehicle	X07	Truck	Ford F350	2006	IV	119835	Station 7	Operations	2024	County
Light Duty Veh	X04	Truck	Ford F350	2006	IV	119122	Station 04	Operations	2024	County
Light Duty Veh	X10	Truck	Ford F350	2009	IV	103183	Station 10	Operations	2024	County
Tow Vehicle	X02	Truck	Ford F350	2006	IV	58648	Station 02	Operations	2024	County
Light Duty Veh	X21	Truck	Ford F350	2006	IV	58530	Station 21	Operations	2024	County
Ambulance	M18	Ambulance	Ford / Braun no	2019	IV	217736	Station 18	Support Service	2024	State
Ambulance	M10	Ambulance	Ford / Braun no	2022	III	127677	Station 10	Support Service	2024	State
Ambulance	M05	Ambulance	Ford / Braun no	2022	II	93859	Station 5	Support Service	2024	State
Ambulance	M07	Ambulance	Chevy / Braun n	2023	II	71136	Station 7	Support Service	2024	State
EMS Support Ve	EMS Ca	SUV	Ford Expedition	2015	III	80505	EMS	Support Service	2024	State
EMS Support Ve	EMS Ca	SUV	Ford Expedition	2015	III	60904	EMS	Support Service	2024	State
Support Veh	Aux 4	Flatbed	Ford F-450		IV	0	Fire Wareho	Auxiliary Service	2024	County
Support Veh	BC Disp	SUV	Ford Expedition		IV	0	Dispatch	Auxillary Service	2024	County
Support Veh	BC Train	Truck	Ford F350		IV	0	BC Train	Training	2024	County
Support Veh	Capt Ea	SUV	Ford Expedition	2005	IV	358238	East Captain	Training Vol	2025	County
Support Veh	Aux 1	SUV	Ford Escape	2006	IV	191840	FASO	Auxiliary Service	2025	County
Light Duty Veh	OS1	Pickup Truck	Toyota Tacoma		IV	0	WSO V	Operations / O	2025	State
UTV	UTV- LG	UTV	Polaris Ranger		IV	0	Kohanaiki To	Operations / O	2025	State
Fire Engine	E21	Type 1 Engine	Pierce	2006	IV	85704	Station 21	Operations	In Finance	County
Fire Engine	E06	Type 1 Engine	Pierce	2007	IV	111704	Station 6	Operations	In Finance	County
Fire Engine	E03	Type 1 Engine	Pierce	2012	IV	60200	Station 03	Operations	In Finance	County
Light Duty SUV	BC02	SUV	Ford expedition	2018	IV	119600	Station 16	Operations	In Finance	County
Light Duty SUV	BC01	SUV	Ford expedition	2018	III	59350	Station 01	Operations	In Finance	County
Support Veh	F1	SUV	Chevy Tahoe		IV	0	F1	Admin	In Finance	County

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**Fire Engine and Specialty Vehicles:**

Apparatus Class	Call Sign	Apparatus Type	M/M	Year	Ryr	Calc Y	Status	Cond	Mileage	Details	Rec Order YR	Planned Order Year	Plate Number	Funding Source	Rating Description
Specialty Veh	HZ04	Hazmat	Marion	1997	20	2017	Frontline	IV	80038	Hazmat	2013	Ordered	HFD 438	County Lease	Needs immediate consideration
Fire Engine	E06	Type 1 Engine	Pierce	2007	15	2022	Frontline	IV	111704	Pump 1,000 gal	2018	Qued	HFD 500	County Lease	Needs immediate consideration
Fire Engine	E21	Type 1 Engine	Pierce	2006	15	2021	Frontline	IV	85704	Pump 1,000 gal	2017	Qued	HFD 482	County Lease	Needs immediate consideration
Fire Engine	E19	Type 1 Engine	Pierce	2006	15	2021	Frontline	IV	81598	Pump 1,000 gal	2017	Ordered	HFD 483	County Lease	Needs immediate consideration
Fire Engine	E10	Type 1 Engine	Pierce	2012	15	2027	Frontline	IV	99898	Pump 1,000 gal	2023	Ordered	HFD 525	County Lease	Needs immediate consideration
Specialty Veh	HZ21	Hazmat	Pierce	2005	20	2025	Frontline	IV	58530	Hazmat	2021	Next FY	HFD 470	County Lease	Needs immediate consideration
Fire Engine	E03	Type 1 Engine	Pierce	2012	15	2027	Frontline	IV	60200	Pump 1,000 gal	2023	Qued	HFD 523	County Lease	Needs immediate consideration
Fire Engine	E04	Type 1 Engine	Pierce	2012	15	2027	Frontline	IV	36810	Pump 1,000 gal	2023	Next FY	HFD 441	County Lease	Needs immediate consideration
Specialty Veh	HR02	Heavy Rescue	Pierce	2008	20	2028	Frontline	IV	30653	Heavy rescue	2024		HFD 504		Needs immediate consideration
Specialty Veh	HR07	Heavy Rescue	Pierce	2009	20	2029	Frontline	III	34732	Heavy rescue	2025		HFD 499		Qualifies for replacement
Fire Engine	E05	Type 1 Engine	KME	2016	15	2031	Frontline	III	59186	Pump 1,000 gal	2027		HFD 552		Qualifies for replacement
Fire Engine	E18	Type 1 Engine	Pierce	2016	15	2031	Frontline	III	52606	Pump 1,000 gal	2027		HFD 564		Qualifies for replacement
Fire Engine	E01	Type 1 Engine	Pierce	2016	15	2031	Frontline	III	46879	Pump 1,000 gal	2027		HFD 565		Qualifies for replacement
Fire Engine	E09	Type 1 Engine	KME	2015	15	2030	Frontline	II	37700	Pump 1,000 gal	2026		HFD 538		Mission Capable
Fire Engine	E08	Type 1 Engine	KME	2016	15	2031	Frontline	II	31782	Pump 1,000 gal	2027		HFD 553		Mission Capable
Fire Engine	E15	Type 1 Engine	KME	2015	15	2030	Frontline	II	27260	Pump 1,000 gal	2026		HFD 539		Mission Capable
Specialty Veh	L02	Ladder	KME	2015	15	2030	Frontline	II	17412	Ladder 750 gal	2026		HFD 540		Mission Capable
Fire Engine	E11	Type 1 Engine	KME	2018	15	2033	Frontline	II	32904	Pump 1,000 gal	2029		HFD 570		Mission Capable
Fire Engine	E12	Type 1 Engine	KME	2019	15	2034	Frontline	I	22630	Pump 1,000 gal	2030		HFD 576		Good
Fire Engine	E16	Type 1 Engine	KME	2019	15	2034	Frontline	I	20968	Pump 1,000 gal	2030		HFD 575		Good
Fire Engine	E14	Type 1 Engine	Pierce	2024	15	2039	Frontline	I	121	Pump 1,000 gal	2035		HFD 643		Good
Fire Engine	E20	Type 1 Engine	Pierce	2020	15	2035	Frontline	I	18482	Pump 1,000 gal	2031		HFD 595		Good
Fire Engine	E07	Type 1 Engine	KME	2021	15	2036	Frontline	I	13280	Pump 1,000 gal	2032		HFD 597		Good
Fire Engine	E17	Type 1 Engine	KME	2021	15	2036	Frontline	I	9219	Pump 1,000 gal	2032		HFD 596		Good

Currently the Hawaii Fire Department maintains Twenty-five (25) Frontline Engines or Specialty Vehicles. Sixteen (16) of these trucks meet our current replacement standards for years of service. Nine (9) trucks are beyond the current standards for expected life. The current expected cost of replacement is between \$1,200,000 and \$2,000,000 dependent on vehicle. Fire Engines are currently running around 1.2 million and the specialty vehicles have been seen to run closer to two million. The current lead time from factories is about four years from order to delivery.

Currently it is our recommendation to order two to three vehicles a year for the next six years. This will allow us to achieve a 15-year replacement with a four-year lead time by the year 2031. This plan is subject to change based on market conditions and changes in delivery times from major manufacturers. Expected costs in new vehicle acquisition per year average out to 2.32 million based on expected costs.

- 1,200,000 x 19 vehicles = 22,800,000
- 2,000,000 x 6 vehicles = 12,000,000
- Total Cost of Acquisition of Fleet = 34,800,000 / 15-year replacement cycle =
- **2.32 million annual expected replacement cost**

These vehicles are currently funded through a revolving lease system in 010.221.6221.02.115. See the following page for a ten (10) year lease breakdown.

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

10 Yr Lease Schedule for 010.221.6221.02.115:

Equipment	Total Lease Amount	Term	Date of 1st Payment	Date of Last Payment	Arr Year	Monthly Payment													
CURRENT LEASES							FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	
IFB# 3638 2019 KME Custc	1,454,049.03	60	3/14/2019	3/14/2024		26,205.70	-	-	-	-	-	-	-	-	-	-	-	-	
IFB# 3803 Triple Combina	1,487,091.28	60	1/29/2021	1/29/2026		25,411.18	304,934.16	152,467.08	-	-	-	-	-	-	-	-	-	-	
IFB# 3880 2020 Ford F550	350,889.05	60	1/31/2022	1/31/2027		6,138.58	73,662.96	73,662.96	36,831.48	-	-	-	-	-	-	-	-	-	
IFB# 3880 2020 Pierce Arr	771,656.52	60	1/29/2021	1/29/2026		13,198.79	158,385.48	79,192.74	-	-	-	-	-	-	-	-	-	-	
RFQ 7051 - Digital Multi-F	13,441.20	60	7/19/2023	7/19/2028		224.02	2,688.24	2,688.24	2,688.24	-	-	-	-	-	-	-	-	-	
<b>TOTAL =</b>	<b>4,077,127.08</b>			<b>Per Year =</b>			<b>539,670.84</b>	<b>308,011.02</b>	<b>39,519.72</b>	<b>2,688.24</b>	-	-	-	-	-	-	-	-	
REQUESTED FOR: FY20XX-YY							FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	
Engine 10 and Engine 19	2,000,000.00	60	1/1/2028	12/31/2032	2028	\$34,187.49	-	-	-	335,977.20	447,969.60	447,969.60	447,969.60	447,969.60	111,992.40	-	-	-	
Hazmat 4 Truck	1,500,000.00	60	1/1/2028	12/31/2032	2028	\$25,640.62	-	-	-	230,765.59	307,687.45	307,687.45	307,687.45	307,687.45	76,921.86	-	-	-	
Engine 03, 06, 21	3,000,000.00	60	1/1/2028	12/31/2032	2028	\$51,281.24	-	-	-	615,374.91	615,374.91	615,374.91	615,374.91	615,374.91	615,374.91	-	-	-	
Hazmat 21, Engine 04	2,625,000.00	60	1/1/2029	12/31/2033	2029	\$44,871.09	-	-	-	538,453.04	538,453.04	538,453.04	538,453.04	538,453.04	538,453.04	-	-	-	
Heavy Rescue 2 and 7	3,300,000.00	60	1/1/2030	12/31/2034	2030	\$56,409.37	-	-	-	-	676,912.40	676,912.40	676,912.40	676,912.40	676,912.40	676,912.40	-	-	
Engine 15, Engine 09	2,300,000.00	60	1/1/2031	12/31/2035	2031	\$39,315.62	-	-	-	-	-	471,787.43	471,787.43	471,787.43	471,787.43	471,787.43	471,787.43	-	
Ladder 02, Engine 01	3,000,000.00	60	1/1/2032	12/31/2036	2032	\$51,281.24	-	-	-	-	-	-	615,374.91	615,374.91	615,374.91	615,374.91	615,374.91	615,374.91	
Engine 05, Engine 18	2,500,000.00	60	1/1/2033	12/31/2037	2033	\$42,734.37	-	-	-	-	-	-	-	512,812.42	512,812.42	512,812.42	512,812.42	512,812.42	
Engine 08, Engine 11	2,600,000.00	60	1/1/2034	12/31/2038	2034	\$44,443.74	-	-	-	-	-	-	-	-	533,324.92	533,324.92	533,324.92	533,324.92	
Engine 12, Engine 16	2,700,000.00	60	1/2/2035	12/31/2039	2035	\$46,153.12	-	-	-	-	-	-	-	-	-	553,837.42	553,837.42	553,837.42	
Engine 20, Engine 17	2,800,000.00	60	1/1/2036	12/31/2040	2036	\$47,862.49	-	-	-	-	-	-	-	-	-	-	-	574,349.91	
<b>TOTAL =</b>	<b>28,325,000.00</b>			<b>Per Year =</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>1,182,117.70</b>	<b>1,909,485.01</b>	<b>2,586,397.41</b>	<b>3,058,184.83</b>	<b>3,673,559.74</b>	<b>3,619,629.38</b>	<b>2,810,212.08</b>	<b>2,687,137.10</b>	<b>2,789,699.58</b>	
<b>Overall total per year =</b>							<b>539,670.84</b>	<b>308,011.02</b>	<b>39,519.72</b>	<b>1,184,805.94</b>	<b>1,909,485.01</b>	<b>2,586,397.41</b>	<b>3,058,184.83</b>	<b>3,673,559.74</b>	<b>3,619,629.38</b>	<b>2,810,212.08</b>	<b>2,687,137.10</b>	<b>2,789,699.58</b>	
<b>Increase (Decrease) each year =</b>							<b>(209,645.60)</b>	<b>(231,659.82)</b>	<b>(268,491.30)</b>	<b>1,145,286.22</b>	<b>724,679.07</b>	<b>676,912.40</b>	<b>471,787.43</b>	<b>615,374.91</b>	<b>(53,930.37)</b>	<b>(809,417.30)</b>	<b>(123,074.98)</b>	<b>(123,074.98)</b>	<b>102,562.48</b>

\*Italics indicates estimates before amount and start date are known. (Examples: number of months leasing in first year lease; date of lease expiration; lease rate)

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**Tankers**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Re	Calc Y	Status	Con d	Mileage	Details	Rec Order YR	Actual Order Year	Plate Number	Rating Description
Tanker	E20A	Type 3 Wildland	International	1978	25	2003	Frontline	IV	148000	Pump 550 gal	1999	FY25/26	HFD 531	Needs immediate consideration
Tanker	E16B	Type 1 Engine	Seagrave	1980	25	2005	Frontline	IV	147050	Pump 1,000 gal	2001	FY26/27	HFD 330	Needs immediate consideration
Tanker	X05B	Type 3 Wildland	International	1980	25	2005	Frontline	IV	78000	Pump 500 gal	2001	FY27/28	SE165	Needs immediate consideration
Tanker	T09B	Type 3 Wildland	AM General	1985	25	2010	Frontline	IV	23170	Tank 1,200 gal	2006	FY29/30	HFD 513	Needs immediate consideration
Tanker	BT05D	Type 3 Wildland	International	1986	25	2011	Frontline	IV	132756	Brush truck 500 gal	2007	FY30/31	HFD 528	Needs immediate consideration
Tanker	E19A	Type 3 Wildland	Amertek Inc.	1988	25	2013	Frontline	IV	29261	Pump 660 gal	2009	FY31/32	S9723	Needs immediate consideration
Tanker	E08A	Type 3 Wildland	West Mark	1989	25	2014	Frontline	IV	230000	Pump 500 gal	2010	FY32/33	HFD 530	Needs immediate consideration
Tanker	T11C	Type 1 Engine	SEAGRAVE	1990	25	2015	Frontline	IV	2318	Tanker 1000 gal	2011	FY33/34	HFD 390	Needs immediate consideration
Tanker	E10D	Type 3 Wildland	International	1991	25	2016	Frontline	IV	122126	Pump 500 gal	2012	FY34/35	SD 911	Needs immediate consideration
Tanker	X11	Type 2 Tactical Tende	Paystar	1993	25	2018	Frontline	IV	46525	Tank 700 gal	2014	FY35/36	HFD 418	Needs immediate consideration
Tanker	E01A	Type 1 Engine	HME	1996	25	2021	Frontline	IV	16894	Pump 1,000 gal	2017	FY36/37	HFD 432	Needs immediate consideration
Tanker	T20	Type 2 Support Tende	Peterbilt	2006	15	2021	Frontline	IV	41010	Tank 3,000 gal	2017	FY37/38	HFD 543	Needs immediate consideration
Tanker	T07B	Type 1 Engine	International	1998	25	2023	Frontline	IV	101947	Tank 2000 gal	2019	FY38/39	HFD 519	Needs immediate consideration
Tanker	T11	Type 3 Support Tende	Peterbilt / Freedom f	2012	15	2027	Frontline	III	50548	Tank 2,000 gal	2023	FY39/40	HFD 514	Qualifies for replacement
Tanker	T10	Type 2 Support Tende	Peterbilt / freedom f	2014	15	2029	Frontline	III	50599	Tanker 3,000 gal	2025	FY40/41	HFD 534	Qualifies for replacement
Tanker	T16	Type 2 Support Tende	Kenworth / KME	2015	15	2030	Frontline	II	24259	Tank 3,000 gal	2026	FY41/42	HFD 550	Mission Capable
Tanker	T03	Type 2 Support Tende	Kenworth / KME	2016	15	2031	Frontline	II	27620	Tanker 3,000 gal	2027	FY42/43	HFD 557	Mission Capable
Tanker	T14	Type 2 Tactical Tende	International / KME	2018	15	2033	Frontline	II	28921	Tank 1,200 gal	2029	FY43/44	HFD 573	Mission Capable
Tanker	T09	Type 3 Support Tende	International	2019	15	2034	Frontline	I	15880	Tanker 1,250 gal	2030	FY44/45	HFD 580	Good
Tanker	T15	Type 2 Tactical Tende	International / Big Do	2021	15	2036	Frontline	I	6341	Tank 1,200 gal	2032	FY45/46	HFD 603	Good
Tanker	BD9B	Type 2 Tactical Tende	International	2019	25	2044	Frontline	I	1289	Tanker 1250 Off Roa	2040	FY46/47	HFD 608	Good

Currently the Hawaii Fire Department maintains Twenty-three (23) Frontline Tankers. Eight (8) of these trucks meet our current replacement standards for years of service. Fifteen (15) trucks are beyond the current standards for expected life. The current expected cost of a replacement is around \$600,000. The current lead time from factories is about two to three years from order to delivery.

Currently it is our recommendation to order one vehicle a year for the foreseeable future. Expected costs in new vehicle acquisition per year average at \$690,000 a year based on current expected costs.

- 600,000 x 23 vehicles = 13,800,000
- Total Cost of Acquisition of Fleet = 34,800,000 / 20 average year replacement cycle =
- **\$690,000 annual expected replacement cost**

*\*The Hawaii Fire Department is expecting four donated tankers through the Sayre Foundation within the next year or so. As such no tankers are queued for FY25/26 for replacement.*

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**Brush Trucks:**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Ryr	Calc Y	Status	Con d	Mileage	Rec Order YR	Actual Order Year	Plate Number	Notes	Rating Description
Brush Truck	E11A	Type 5 Wildland	International	1988	25	2013	Frontline	IV	170005	2011	2023	HFD 529	CDBG 23/24	Needs immediate consideration
Brush Truck	BR16B	Type 6 Wildland	Chevy 30	1986	25	2011	Frontline	IV	128030	2009	Next FY	S9863	VFA	Needs immediate consideration
Brush Truck	BR11C	Type 4 Wildland	Ford	1995	25	2020	Frontline	IV	177466	2018	2023	HFD 425	CDBG 23/24	Needs immediate consideration
Brush Truck	BR01A	Type 6 Wildland	Chevrolet	1989	25	2014	Frontline	IV	89030	2012	2023	HFD 508	VFA 23/24	Needs immediate consideration
Brush Truck	BR11D	Type 6 Wildland	Chevy	1988	25	2013	Frontline	IV	66413	2011	2023	S9300	CDBG 23/24	Needs immediate consideration
Brush Truck	BR05C	Type 6 Wildland	International	1990	25	2015	Frontline	IV	80643	2013	2024	SB837	CDBG 24/25	Needs immediate consideration
Brush Truck	X05D	Type 6 Wildland	Chevrolet	1996	25	2021	Frontline	IV	136757	2019		HFD 463		Needs immediate consideration
Brush Truck	BR19A	Type 6 Wildland	Chevrolet	1985	25	2010	Frontline	IV	25667	2008		S 9201		Needs immediate consideration
Brush Truck	BR08A	Type 5 Wildland	West Mark	1990	25	2015	Frontline	IV	45160	2013	2023	HFD 469	VFA 23/24	Needs immediate consideration
Brush Truck	BR05B	Type 6 Wildland	Ford	1994	25	2019	Frontline	IV	81658.2	2017		SB878		Needs immediate consideration
Brush Truck	BR17	Type 6 Wildland	Ford F350	1995	15	2010	Frontline	IV	71092	2008	2024	HFD 424	CDBG-MIT	Needs immediate consideration
Brush Truck	BR18A	Type 6 Wildland	Ford	1998	25	2023	Frontline	IV	49502	2021		HFD 537		Needs immediate consideration
Brush Truck	BR08	Type 6 Wildland	Ford F550	2001	15	2016	Frontline	IV	44956	2014	2024	HFD 453	FY24/25	Needs immediate consideration
Brush Truck	BR06	Type 6 Wildland	Ford F550	2008	15	2023	Frontline	IV	68694	2021	Next FY	HFD 489	County	Needs immediate consideration
Brush Truck	BR07B	Type 6 Wildland	Ford F350	2008	25	2033	Frontline	IV	17402	2031		HFD 491		Needs immediate consideration
Brush Truck	BR10	Type 6 Wildland	Ford F550 / KME	2016	15	2031	Frontline	III	54901	2029		HFD 562		Qualifies for replacement
Brush Truck	BR11	Type 6 Wildland	Ford / KME	2015	15	2030	Frontline	II	2503	2028	2024	HFD 551	CDBG-MIT	Mission Capable
Brush Truck	BR18	Type 6 Wildland	Ford F550	2019	15	2034	Frontline	II	20809	2032		HFD 583		Mission Capable
Brush Truck	BR05	Type 6 Wildland	Ford F550 / Rose	2020	15	2035	Frontline	I	13931	2033	2024	HFD 609	CDBG-MIT	Good
Brush Truck	BR15	Type 6 Wildland	Ford F550	2022	15	2037	Frontline	I	39372	2035		HFD 631		Good
Brush Truck	BR09A	Type 6 Wildland	International	2019	25	2044	Frontline	I	7488	2042		HFD 611		Good
Brush Truck	BR16	Type 6 Wildland	Ford F550	2023	15	2038	Frontline	I	4153	2036		HFD 638		Good
Brush Truck	BR14	Type 6 Wildland	Ford F550	2023	15	2038	Frontline	I	3770	2036		HFD 634		Good
Brush Truck	BR09	Type 6 Wildland	Ford F550	2023	15	2038	Frontline	I	3189	2036		HFD 637		Good
Brush Truck	BR20A	Type 6 Wildland	Ford F550	2024	25	2049	Frontline	I	122	2047		HFD 644		Good

Currently the Hawaii Fire Department maintains 26 Frontline Brush Trucks. Eight (8) of these trucks meet 1901 standards. Eighteen (18) trucks are beyond the current standards for expected life. The current expected cost of replacement is between \$210,000 and \$370,000 dependent on the level of customization.

Currently it is our recommendation to order one vehicle a year through County general fund expenditures and to seek out grants or donations for a second unit each year for the foreseeable future. Expected costs in new vehicle acquisition per year average out to \$370,000 a year for budgeting of County funding.

**\$370,000 annual expected replacement cost (County Funds)**

It should be noted that the current Fire Administration has been very successful in achieving alternate sources of funding to supply brush trucks.

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**Light Duty Vehicles:**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Ryr	Calc Y	Status	Con d	Mileage	Rec Order YR	Actual Order Year	Plate Number	Funding Source	Rating Description
Fuel Truck	FT14	350 Gal A	Ford	1993	20	2013	Frontline	IV	200000	2011	2024	HFD 410	Sayres	Needs Immediate Consideration
Tow Vehicle	X07	Truck	Ford F350	2006	15	2021	Frontline	IV	119835	2019	2024	HFD 598	County	Needs Immediate Consideration
Light Duty Veh	X11	Truck	Ford F250	2002	20	2022	Frontline	IV	160293	2020	Next FY	HFD 606	County	Needs Immediate Consideration
Fuel Truck	FT02	350 Gal A	Ford F350	1999	20	2019	Frontline	IV	78693	2017	2024	HFD 106	Sayres	Needs Immediate Consideration
Light Duty Veh	X06	Truck	Dodge ram 250	1992	20	2012	Frontline	IV	46819	2010	Next FY	HFD 402	County	Needs Immediate Consideration
Light Duty Veh	X04	Truck	Ford F350	2006	20	2026	Frontline	IV	119122	2024	2024	HFD 480	County	Needs Immediate Consideration
Tow Vehicle	X02	Truck	Ford F350	2006	15	2021	Frontline	IV	58648	2019	2024	HFD 612	County	Needs Immediate Consideration
Light Rescue	R07	Custom T	Ford F550	2009	20	2029	Frontline	IV	154534	2027		HFD 496		Needs Immediate Consideration
Light Duty SUV	BC02	SUV	Ford expeditio	2018	10	2028	Frontline	IV	119600	2026	2024	HFD 572	County	Needs Immediate Consideration
Light Duty Veh	X14	Truck	Ford F350	2005	20	2025	Frontline	IV	152856	2023		HFD 474		Needs Immediate Consideration
Light Duty Veh	X01	Truck	Ford F350	2006	20	2026	Frontline	IV	104783	2024		HFD 479		Needs Immediate Consideration
Light Rescue	R02	Custom T	Ford F550	2009	20	2029	Frontline	IV	95896	2027		HFD 495		Needs Immediate Consideration
Light Duty Veh	X10	Truck	Ford F350	2009	20	2029	Frontline	IV	103183	2027	2024	HFD 494	PGV Fund	Needs Immediate Consideration
Light Duty Veh	X21	Truck	Ford F350	2006	20	2026	Frontline	IV	58530	2024	2024	HFD 481	County	Needs Immediate Consideration
Light Duty SUV	BC01	SUV	Ford expeditio	2018	10	2028	Frontline	IV	59350	2026	2024	HFD 571	County	Needs Immediate Consideration
Light Duty Veh	X12	Truck	Ford F350	2005	20	2025	Frontline	IV	71119	2023		HFD 473		Needs Immediate Consideration
Light Duty Veh	X03	SUV	Ford explorer	2008	20	2028	Frontline	IV	66460	2026		HFD 501		Needs Immediate Consideration
Light Duty Veh	X09	Truck	Ford F350	2009	20	2029	Frontline	IV	64868	2027		HFD 493		Needs Immediate Consideration
Light Duty Veh	X08	Truck	Ford F150	2017	20	2037	Frontline	I	20334	2035		HFD 568		Good

Currently the Hawaii Fire Department maintains nineteen (19) frontline light duty vehicles. Ten (10) of these vehicles meet our current replacement standards for years of service. Sixteen (16) vehicles are beyond the current standards for expected life. The current expected cost of replacement is between \$80,000 and \$350,000. The current lead time from factories is about two to four years from order to delivery.

Currently it is our recommendation to order four vehicles a year for the next three years. Expected costs in new vehicle acquisition per year average at \$690,000 a year based on current expected costs.

- 240,000 x 2 vehicles (FT) = 480,000
- 100,000 x 19 vehicles (X) = 1,900,000
- 350,000 x 2 vehicles (LR) = 700,000
- 80,000 x 2 vehicles (BC) = 160,000
- Total Cost of Acquisition of Fleet = 3,240,000 / 15 average year replacement cycle =

**\$216,000 annual expected replacement cost**

*\*Two 1000-gallon fuel trucks are currently being ordered by the Sayre Foundation with arrival expected in the next few months.*

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**EMS Ambulances:**

Apparatus Class	Call Sign	Apparatus Type	M/M	Year	Ryr	Calc Y	Status	Co nd	Mileag e	Assigned	Details	Rec Order Year	Actual Order Year	Plate Number	Rating Description
Ambulance	M18	Ambulance	Ford / Braun northwest	2019	4	2023	Frontline	IV	217736	Station 18	ordered	2022	2024	HFD 592	Needs Immediate Consideration
Ambulance	M10	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	III	127677	Station 10	ordered	2025	2024	HFD 615	Qualifies for Replacement
Ambulance	M05	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	II	93859	Station 5	ordered	2025	2024	HFD 614	Mission Capable
Ambulance	M09	Ambulance	Ford / Braun northwest	2019	4	2023	Frontline	II	49456	Station 9		2022		HFD 590	Mission Capable
Ambulance	M14	Ambulance	Ford / Braun northwest	2021	4	2025	Frontline	II	87755	Station 14		2024		HFD 604	Mission Capable
Ambulance	M07	Ambulance	Chevy / Braun northwest	2023	4	2027	Frontline	II	71136	Station 7	ordered	2026	2024	HFD 620	Mission Capable
Ambulance	M03	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	I	69912	Station 3		2025		HFD 619	Good
Ambulance	M08	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	I	46305	Station 8		2025		HFD 618	Good
Ambulance	M11	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	I	56603	Station 11A		2025		HFD 617	Good
Ambulance	M15	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	I	30222	Station 15		2025		HFD 613	Good
Ambulance	M06	Ambulance	Ford / Braun northwest	2022	4	2026	Frontline	I	27838	Station 6		2025		HFD 616	Good
Ambulance	M16	Ambulance	Ford / Braun northwest	2024	4	2028	Frontline	I	100	Station 16	received	2027	2024	HFD 647	Good
Ambulance	M20	Ambulance	Ford / Braun northwest	2024	4	2028	Frontline	I	100	Station 20	received	2027	2024	HFD 645	Good
Ambulance	M01	Ambulance	Ford / Leader	2024	4	2028	Frontline	I	100	Station 1	received	2027	2024	HFD 646	Good
Ambulance	M12	Ambulance	Ford / Braun northwest	2024	4	2028	Frontline	I	100	Station 12	received	2027	2024	HFD 648	Good

**EMS Support Vehicles:**

Apparatus Class	Call Sign	Apparatus Type	M/M	Year	Ryr	Calc Y	Status	Co nd	Mileag e	Assigned	Details	Rec Order Year	Actual Order Year	Plate Number	Rating Description
EMS Support	EMS C	SUV	Ford Expedition	2015	15	2030	Frontline	III	80505	EMS	ordered	2028		HFD 544	Qualifies for Replacement
EMS Support	EMS C	SUV	Ford Expedition	2015	15	2030	Frontline	III	60904	EMS	ordered	2028		HFD 545	Qualifies for Replacement
EMS Support	EMS T	Van (Low)	Ford Transit	2015	15	2030	Frontline	III	45130	EMS		2028		HFD 554	Qualifies for Replacement
EMS Support	EMS C	SUV	Ford Expedition	2019	15	2034	Frontline	I	55524	EMS		2032		HFD 588	Good
EMS Support	EMS T	SUV	Toyota 4Runner	2020	15	2035	Frontline	I	21100	EMS		2033		HFD 589	Good
EMS Support	EMS T	Van (High)	Ford Transit	2022	15	2037	Frontline	I	15230	EMS		2035		HFD 640	Good
EMS Support	EMS E	Van (Box)	International	2023	15	2038	Frontline	I	18120	EMS		2036		HFD 621	Good

Currently the Hawaii Fire Department maintains fifteen (15) frontline ambulances (M19 Volcano is maintained by the Federal Government). Thirteen (13) of these vehicles meet our current replacement standard. Two (2) vehicles are beyond current standards for expected life. The current expected cost of replacement is \$350,000 per ambulance and an average of \$150,000 for support vehicle. The current lead time from factories is about one to two years from order to delivery.

Currently it is our recommendation to order four ambulances and one to two support vehicles a year. Expected costs in new vehicle acquisition per year average out to \$1,678,800 a year based on current expected costs.

- 350,000 x 15 vehicles (Medics) = 5,250,000 / 4 Year replacement = 1,312,500
- 150,000 x 7 vehicles (Support Vehicles) = 1,050,000 / 15 year replacement = 70,000

**\$1,382,500 annual estimated replacement cost (State Funded)**

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**Support and Admin Vehicles:**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Ryr	Calc Y	Status	Co nd	Mileage	Rec Order YR	Actual Order Year	Plate Number	Funding Source	Rating Description
Support Veh	Mech 2	Truck	Ford F350 4x4	1989	15	2004	Frontline	IV	293278	2002	Next FY	HFD 318	County	Needs immediate consideration
Support Veh	Capt East	SUV	Ford Expedition	2005	20	2025	Frontline	IV	358238	2023	2025	HFD 465	County	Needs immediate consideration
Support Veh	IT	SUV	Ford Explorer	2005	20	2025	Frontline	IV	314380	2023	Next FY	HFD 467	County	Needs immediate consideration
Support Veh	INS24	SUV	Ford Expedition	2005	15	2020	Frontline	IV	282902	2018	Next FY	HFD 561	County	Needs immediate consideration
Support Veh	INS23	SUV	Ford Expedition	2005	15	2020	Frontline	IV	253543	2018	Next FY	HFD 560	County	Needs immediate consideration
Support Veh	Mech 3	Truck	Chevy K3500	1994	15	2009	Frontline	IV	100392	2007	Next FY	HFD 423	County	Needs immediate consideration
Support Veh	INS22	SUV	Ford Explorer	2008	15	2023	Frontline	IV	203791	2021		HFD 503		Needs immediate consideration
Support Veh	Aux 1	SUV	Ford Escape	2006	20	2026	Frontline	IV	191840	2024	2025	CH 2598	County	Needs immediate consideration
Support Veh	INS14	SUV	Ford Expedition	2008	15	2023	Frontline	IV	135520	2021		CH 2709		Needs immediate consideration
Support Veh	Mech 1	Truck	Ford F350 4x4	2016	15	2031	Frontline	IV	145538	2029		HFD 563		Needs immediate consideration
Support Veh	INS13	SUV	Ford Explorer	2016	15	2031	Frontline	III	71127	2029		HFD 559		Qualifies for replacement
Support Veh	PV1	SUV	Jeep Cherokee	2019	20	2039	Frontline	II	69406	2037		HFD 594		Mission Capable
Support Veh	AC1	SUV	Jeep Grand Chero	2016	20	2036	Frontline	II	57081	2034		HFD 556		Mission Capable
Support Veh	F2	SUV	Ford Expedition	2016	20	2036	Frontline	II	52696	2034		HFD 558		Mission Capable
Support Veh	AC2	SUV	Ford Explorer	2019	20	2039	Frontline	I	34055	2037		HFD 593		Good
Support Veh	Aux 2	Van (SM	Nissan NV200	2020	20	2040	Frontline	I	19963	2038		HFD 599		Good
Support Veh	Capt West	Truck	Toyota Tacoma	2023	20	2043	Frontline	I	1553	2041		HFD 642		Good
Support Veh	INS11	Truck	Toyota Tacoma	2023	15	2038	Frontline	I	8367	2036		HFD 630		Good
Support Veh	INS12	SUV	Toyota Rav-4	2024	15	2039	Frontline	I	8137	2037		HFD 632		Good
Support Veh	INS21	SUV	Toyota Rav-4	2024	15	2039	Frontline	I	6550	2037		HFD 633		Good

Currently the Hawaii Fire Department maintains twenty-five (25) frontline light duty support vehicles. Ten (10) of these vehicles meet our current replacement standards for years of service. Fifteen (15) vehicles are beyond current standards for expected life. The current expected cost of replacement is between \$50,000 and \$110,000. The current lead time from factories is about one from order to delivery.

Currently it is our recommendation to order five vehicles next year, and then one to two vehicles a year. Expected costs in new vehicle acquisition per year average out to \$97,000 a year based on current expected costs.

- 110,000 x 3 vehicles (Mech) = 330,000
- 60,000 x 5 vehicles (Admin) = 300,000
- 50,000 x 9 vehicles (Prevention) = 450,000
- 80,000 x 8 vehicles (Other) = 640,000
- Total Cost of Acquisition of Fleet = 1,720,000 / 17.8 average year replacement cycle =

**\$97,000 annual expected replacement cost**

HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

**Ocean Safety Light Duty Vehicles:**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Ryr	Calc Y	Status	Co nd	Mileage	Assigned	Details	Rec Order YR	Actual Order Year	Plate Number	Rating Description
Light Duty Veh	OS1	Pickup Truck	Toyota Tacoma		15	15	Frontline	IV		WSO V	Ordered		2025		Needs immediate consideration
Light Duty Veh	OS3-2	Pickup Truck	Toyota Tacoma		15	15	Frontline	IV		Hilo WSO III	Qued				Needs immediate consideration
Light Duty Veh	LG07	Pickup Truck	Ford F250	2002	15	2017	Frontline	IV	348404	Pohoiki Tower		2016		HFD 607	Needs immediate consideration
Light Duty Veh	LG08	Pickup Truck	Ford Ranger	2008	15	2023	Frontline	IV	81216	Punaluu Tower		2022		HFD 490	Needs immediate consideration
Light Duty Veh	SKI 1	Pickup Truck	Ford F250	2015	15	2030	Frontline	III	79,840	SKI-1		2029		HFD 546	Qualifies for replacement
Light Duty Veh	SKI 2	Pickup Truck	Ford F250	2015	15	2030	Frontline	III	48,854	SKI-2		2029		HFD 547	Qualifies for replacement
Light Duty Veh	OS3-10	Pickup Truck	Ford F250	2019	15	2034	Frontline	I	56609	Puna WSO III		2033		HFD 584	Good
Light Duty Veh	OS3-12	Pickup Truck	Ford F250	2019	15	2034	Frontline	I	55,281	Kona WSO III		2033		HFD 577	Good
Light Duty Veh	OS2-1	Pickup Truck	Ford F250	2019	15	2034	Frontline	I	19726	East HI WSO IV		2033		HFD 578	Good
Light Duty Veh	OS3-14	Pickup Truck	Ford F150	2023	15	2038	Frontline	I	8707	S. Kohala WSO III		2037		HFD 635	Good
Light Duty Veh	OS3-11	Pickup Truck	Toyota Tacoma	2024	15	2039	Frontline	I	7019	Kau WSO III		2038		HFD 641	Good
Light Duty Veh	OS2-2	Pickup Truck	Toyota Tacoma	2024	15	2039	Frontline	I	4462	West HI WSO IV		2038		HFD 636	Good

**Ocean Safety ATV/UTV:**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Ryr	Calc Y	Status	Co nd	Mileage	Assigned	Details	Rec Order YR	Actual Order Year	Plate Number	Rating Description
Rescue Watercr	SKI-1	Jet Ski	Yamaha FB1800-V	2021	5	2026	Frontline	I	293.9	East HI		2026		HA 0416 X	Good
Rescue Watercr	SKI-1A	Jet Ski	Yamaha FB1800-V	2021	5	2026	back up	I	275	East HI		2026		HA 0417 X	Good
Rescue Watercr	SKI-2	Jet Ski	Yamaha FX1800J-	2022	5	2027	Frontline	I	377.7	West HI		2027		HA 0435 X	Good
Rescue Watercr	SKI-2A	Jet Ski	Yamaha FX1800J-	2022	5	2027	back up	I	370	West HI		2027		HA 0436 X	Good
Rescue Watercr	SKI-3	Jet Ski	Yamaha	2023	5	2028	stored	I	2	storage		2028		HA 0438 X	Good
Rescue Watercr	SKI-3A	Jet Ski	Yamaha	2023	5	2028	stored	I	9.6	storage		2028		HA 0439 X	Good

**Ocean Safety Rescue Watercraft:**

Apparatus Class	Call Sign	Apparatus Type	M/M/M	Year	Ryr	Calc Y	Status	Co nd	Mileage	Assigned	Details	Rec Order YR	Actual Order Year	Plate Number	Rating Description
UTV	UTV-LG2	UTV	Polaris Ranger		5	5	Frontline	IV		Kohanaiki Tower	Ordered	5		UTV- LG24	Needs immediate consideration
UTV	UTV-LG2	UTV	Polaris Ranger	2019	5	2024	Frontline	I	876	Hapuna North Tower		2024		UTV-LG29	Good
UTV	UTV-LG0	UTV	John Deere Gato	2020	8	2028	Frontline	I	424.4	Pohoiki		2028		UTV-LG08	Good
ATV	ATV-LG2	4 wheeler	Honda Rancher	2023	5	2028	Frontline	I	1579	Hapuna Alpha tower		2028		ATV-LG29	Good
ATV	ATV-LG0	4 wheeler	Honda Rancher	2023	5	2028	Frontline	I	1182	Punaluu Tower		2028		UTV-LG09	Good
ATV	ATV- LG2	4 wheeler	Honda Rancher	2024	5	2029	frontline	I	1136	Hapuna North Tower		2029		ATV- LG29	Good
ATV	ATV-LG2	4 wheeler	Honda Rancher	2024	5	2029	Frontline	I	343	Hapuna South Tower		2029		ATV-LG29	Good

Currently the Hawaii Fire Department maintains twelve (12) frontline light duty vehicles for Ocean Safety six (6) Rescue Water Craft (Jet Skis), and seven (7) ATV/UTVs. Four light duty vehicles and one UTV currently need replacement. Current estimated cost are detailed below:

- 50,000 x 12 vehicles (Light Duty) = 600,000 / 15-year cycle = \$40k annual estimated cost
- 30,000 x 6 vehicles (RWC) = 180,000 / 5-year cycle = \$36k annual estimated cost
- 35,000 x 3 vehicles (UTV) = 105,000 / 8-year cycle = \$13,125 annual estimated cost
- 10,000 x 4 vehicles (ATV) = 40,000 / 5-year cycle = \$8k annual estimated cost

**\$97,125 annual expected replacement cost**

## Appendix 1: Station Specific Vehicle Replacement Priority

Location	Engine	Medic	Ladder	Brush Truck	Tanker	Tanker (off-road)	X-Vehicle	X-Vehicle HD	Hazmat	Heavy Rescue	Light Rescue	Helicopter	Fuel Truck	Boat	UTV
Central Fire Station (STN 1)	1	1					1								
Waiakea Fire Station (STN2)			1					1		1	1	1	1	1	
Haihai Fire Station (STN3)	1	1			1		1								
Kaumana Fire Station (STN4)	1						1	1							
Keaau Fire Station (STN5)	1	1		1											
Kealakekua Fire Station (STN6)	1	1		1			1								1
Kailua Fire Station (STN7)	1	1						1		1	1			1	
Honokaa Fire Station (STN8)	1	1		1			1								
Waimea Fire Station (STN9)	1	1		1		1	1								1
Pahoa Fire Station (STN10)	1	1		1	1		1								
Pahala Fire Station (STN11)	1			1	1	1	1								1
Naalehu Fire Station (STN 11a)		1													
Keauhou Fire Station (STN12)	1	1				1	1								
South Kohala Fire Station (STN14)	1	1		1		1	1					1	1		
North Kohala Fire Station (STN15)	1	1		1		1									
Waikolo Fire Station (STN16)	1	1		1	1										
Laupahoehoe Fire Station (STN17)	1			1			1								
Hawaiian Paradise Park Fire Station (STN18)	1	1		1											
Volcano Fire Station (STN19)	1	1				1									
Ocean View Fire Station (STN20)	1	1			1		1								
Makalei Fire Station (STN21)	1						1	1							
Pepeekeo Volunteer Fire Station (STN1A)				1		1									
Hawaiian Acres Volunteer Fire Station (STN5B)				1		1									
Fern Forest Volunteer Fire Station (STN5C)				1		1									
Fern Acres Volunteer Fire Station (STN5D)				1		1									
Milolii Volunteer Fire Station (STN6B)				1		1									
Kalaoa Volunteer Fire Station (STN7B)				1		1									
Paauiolo Volunteer Fire Station (STN8A)				1		1									
Waikii Volunteer Fire Station (STN9A)				1		1									
Kanehoa Volunteer Fire Station (STN9B)				1		1									
Ainoloa Volunteer Fire Station (STN10D)				1		1									
Naalehu Volunteer Fire Station (STN11A)				1		1									
Discovery Harbor Volunteer Fire Station (STN11C)				1		1									
Pahala Volunteer Fire Station (STN11D)				1		1									
Kohala Ranch Volunteer Fire Station (STN14A)				1		1									
Puuanahulu Volunteer Fire Station (STN16B)				1		1									
Hawaiian Paradise Park Volunteer Fire Station (STN18A)				1		1									
Volcano Volunteer Fire Station (STN19A)				1		1									
Ocean View Volunteer Fire Station (STN20A)				1		1									

\*This list prioritizes what HFD will strive to maintain at each station. Vehicles placed at a station not denoted on this list are considered excess and will not be prioritized for replacement through the HFD budget. Volunteer Section will be improved in FY 26/27.

## Appendix 2: Vehicle Types

### What are the types of Fire Vehicles?

While this document is not designed to fully educate the reader into all aspects of Fire Apparatus, in general we will explain the general types of apparatus that the Hawaii Fire Department is seeking to maintain as part of its Fleet Plan. Vehicles are generally type through the National Wildfire Coordinating Group (NWCG). This standardization allows for requesting the appropriate type of resources during a large disaster to make it easier for incident commanders to get what they need.

#### Type 1 Engine:



#### Light Duty Vehicle



#### Type 6+ Brush Truck / Light Rescue (similar)



#### Specialty: Heavy Rescue/Hazmat



#### Support Tender Type 2



#### Specialty: Fuel Truck



#### Tactical Tender Type 2:



#### Specialty: Ladder Truck



HFD FRONTLINE FIRE RESPONSE, FLEET REPLACEMENT PLAN FY25-26

Engine Typing: NWCG

Requirements	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7
Tank minimum capacity (gal)	300	300	500	750	400	150	50
Pump minimum flow (gal/min)	1,000	500	150	50	50	50	10
At rated pressure (psi)	150	150	250	100	100	100	100
Hose: 2½-inch	1,200	1,000	N/A	N/A	N/A	N/A	N/A
Hose: 1½-inch	500	500	1,000	300	300	300	N/A
Hose: 1-inch	N/A	N/A	500	300	300	300	200
Ladders per NFPA 1901	Yes	Yes	N/A	N/A	N/A	N/A	N/A
Master stream 500 gal/min.	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Pump and roll	N/A	N/A	Yes	Yes	Yes	Yes	Yes
Maximum GVWR (lb)	N/A	N/A	N/A	N/A	26,000	19,500	14,000
Personnel (minimum)	4	3	3	2	2	2	2

Water Tender Typing Standard: NWCG

Requirements	Support Type 1	Support Type 2	Support Type 3	Tactical Type 1	Tactical Type 2
Tank capacity (gal)	4,000	2,500	1,000	2,000	1,000
Pump minimum flow (gal/min)	300	200	200	250	250
At rated pressure (psi)	50	50	50	150	150
Maximum refill time (minutes)	30	20	15	N/A	N/A
Pump and roll	N/A	N/A	N/A	Yes	Yes
Personnel (minimum)	1	1	1	2	2

## Appendix 3: Vehicle Replacement Guidelines:

### VEHICLE REPLACEMENT GUIDELINES

#### VEHICLE CONDITION SCORE / VEHICLE REPLACEMENT GUIDELINES

#### **PURPOSE**

The following is a recommended comprehensive assessment of the Hawaii Fire Department's fleet with data that guides and justifies the Department's vehicle replacement requirements. This vehicle condition scoring matrix assesses various data streams to determine current vehicle condition and will assign a numerical "condition score" to each vehicle in the fleet. Thereafter, each vehicle will be assessed, and its condition score updated for as long as the vehicle is maintained by Hawaii Fire and Ocean Safety. Score "thresholds" for retiring each vehicle type will ensure that relevant vehicles are replaced at the right time and sequence.

#### **RECOMMENDATIONS**

1. Review and approve the plan to annually evaluate and "score" the overall condition of all Department vehicles using a customized vehicle scoring application called a *Vehicle Condition Report*.
2. Guides the Department with vehicle acquisition and replacement decisions based on vehicle condition scores to ensure the vehicles are replaced within an identified time frame.

#### **FISCAL IMPACT**

Full implementation of these recommendations should have minimal direct fiscal impact on Department expenditures for the following reasons:

1. Vehicle condition scores will be developed from existing data.
2. Vehicle assessments will occur in conjunction with already scheduled annual preventive maintenance inspections.
3. Data will be extracted from the Department's existing Records Management System.
4. Vehicle condition reports will be developed by existing staff.

Because this plan is designed to guide the Department in fleet replacement decisions, the *Vehicle Condition Report* will compel the Department to either replace or not replace vehicles depending on overall vehicle condition. Actual fleet acquisition and disposal, however, is subject to budgetary limitations and operational needs.

Direct cost savings to the Department will be realized by streamlining fleet replacement planning and budget preparation through the use of vehicle condition scores that will guide the Department's fleet replacement strategy and decision making.

#### **DISCUSSION**

Our HFD (excluding Ocean Safety) fleet consists of 97 light and heavy apparatus of various types. Each type of vehicle has an expected life span which, subject to operational needs and budget restrictions, forms the basis for the Department's fleet replacement schedule.

No State or federal rules exist that mandate when fire apparatus must be retired. Nevertheless, National Fire Protection Association (NFPA) 1901 recommendation, industry best practices, progressive fire agencies, and HFD's own Fire Mechanics, all assert that fire department vehicles have a useful life expectancy and sooner or later, they must be replaced.

Following are comments and recommendations from subject matter experts regarding fire apparatus replacement:

- *The Commission of Fire Accreditation International (CFAI) states that apparatus replacement intervals should be based on the effects of variables such as age, use, and maintenance costs on the useful life span of fire apparatus (Commission on Fire Accreditation International, 1997).*
- *NFPA 1901 states r e c o m m e n d s the removal of apparatus from front-line service after 15 years and from all emergency service after 25 years*
- *NFPA 1912 states "...Apparatus not manufactured to applicable NFPA fire apparatus standards or that are over 25 years old should be replaced."*
- *Various authors suggest that the useful life of fire apparatus varies among fire departments and is affected largely by apparatus utilization, local environment, local operating conditions, routine workload, and scope of preventive maintenance program.*

Currently, the Department's fleet replacement practice is that heavy apparatus (Ladders, Engines, and Specialty Apparatus) are due for replacement after 15 years in front line service and 5 years of relief service. However, age and mileage alone do not take into consideration overall vehicle condition which provides information and compelling fleet replacement guidance. A more strategic and compelling vehicle replacement policy is needed to guide and validate fleet replacement actions. To this end, vehicle condition must be considered when making fleet replacement decisions and vehicle condition thresholds must be implemented so the appropriate vehicles are replaced at the appropriate time.

Establishing replacement cycles for different vehicle types is both an art and a science. It involves judgment, predictions, forecasts, and assumptions on one hand and analysis of available data on the other. Therefore, the following approach will be utilized to identify, prioritize, select, justify, and replace vehicles that have exceeded their useful and economic life span:

The Department approach is based on an economic truism which states that as a vehicle ages, the cost of capital diminishes and its operating costs increase. The combination of these two cost factors produce a cost curve that shows the optimum time to replace vehicles is when the operating costs begin to exceed the capital costs. Deferring replacement of vehicles beyond this optimum financial threshold results in increased fleet costs that are essentially transferred from capital budgets to operating budgets.

The Department has established predetermined condition thresholds based on age, mileage, and other condition criteria. A criteria based replacement strategy dictates the timing of replacement discussions, provides guidance on specific vehicle replacement considerations, and establishes fact-based justification for specific vehicle replacement decisions. Fundamental to this type of vehicle replacement plan is the intent and objective to produce a condition score that only indicates which vehicle(s) of a particular type are due for replacement and which ones should be replaced first. This approach is especially useful in determining when to replace custom vehicles such as fire apparatus. Please note, however, vehicle condition scores are NOT used to indicate fitness for duty or vehicle safety because the overriding criterion for all apparatus in the Fire Department fleet is that every vehicle is safe, reliable, and fully functional.

The intent will be to replace vehicles when the cost to maintain and repair them exceeds a preset threshold dollar amount. This threshold dollar amount is generally the wholesale value of the vehicle at the time the vehicle is being assessed. Whereas the first approach focuses on costs already sustained up to the time of the condition assessment, this last approach takes into consideration expected future operating and maintenance costs that will be incurred in the year or years following the condition

assessment. The intent of knowing when a vehicle's operating costs exceed this threshold amount is to replace the vehicle before a major breakdown occurs. Analysis of historical repair trends and costs can reveal the point at which vehicle repairs start to increase significantly. This is an effective replacement strategy for any vehicle for which a "blue book" value can be established and for which future repair costs can be estimated. Under this schema, fleets can avoid performing repairs that cost more than a vehicle is worth.

Custom fire apparatus – like all vehicles – have a useful life expectancy. Vehicles that are kept beyond their optimum replacement timeline subject the Department to higher vehicle operating costs, reduced vehicle salvage revenue, and longer vehicle out-of-service times due to reduced parts availability, more extensive repairs, expired warranties, and reduced overall suitability to the Department due to obsolescence and new technology and standards. Vehicle condition scores will enable the Department to identify, validate, communicate, and justify which, when, and by how much, vehicles have exceeded their expected life cycle. After vehicle condition results are obtained, appropriate acquisition and disposal action will be taken.

The following chart represents a vehicle condition scoring matrix and would include some or all of the criteria listed in this report.

FACTOR	POINTS
AGE	1 point for each year of chronological age from date in service.
MILES OR HOURS	1 point for each 10,000 miles or 1,000 engine hours of use.
TYPE OF SERVICE	1, 3, or 5 points are assigned based on the type of service the unit is exposed to. For instance, fire pumpers would be given a five because it is classified as severe duty service. In contrast, an administrative sedan would be given a one
MAINTENANCE REPAIR RELIABILITY	1 to 5 points are assigned based on total life Maintenance, Repair costs, and depending on the frequency that a vehicle is in the shop for repair. A five would be assigned to a vehicle in the shop two or more times per month on average, while a one would be assigned to a vehicle in the shop an average of once every three months or less.
CONDITION	This category takes into consideration body condition, rust, interior condition, accident history, anticipated repairs, and so on. A scale of 1 to 5 points is used with 5 being poor condition.

Scores for each factor would be tallied and thresholds set that would rate vehicles as *good*, *mission capable*, *qualifies for replacement*, and/or *needs immediate consideration*.

**POINT RANGES**

POINTS	CONDITION	CATEGORY
Fewer than 18 points	Condition 1	Good
18 to 22 points	Condition 2	Mission capable

23 to 27 points	Condition 3	Qualifies for replacement
28 points and above	Condition 4	Needs immediate consideration

**EXAMPLE:**

Applying the chart above, use a 9-year-old fire pumper planned for replacement in two to three years. The unit has 80,000 miles; is in poor condition; and includes massive amounts of downtime, poor reliability, and repair costs that exceed more than 80 percent of its original purchase price.

The points would be assigned as follows:

- Age = 9 points
- Miles or engine hours = 8 points
- Type of service is severe = 5 points
- Maintenance, Repair, Reliability = 3 points
- Condition = 2 points

Total = 27 points and needs immediate consideration

**CONCLUSION**

Current vehicle ages are appropriately stated in Department's current replacement policy and the Department endeavors to replace a sufficient number of vehicles each fiscal year so that no vehicles in the fleet exceed established limits and criteria.

New apparatus replacement guidelines based on age, mileage, condition, maintenance cost, and obsolescence should be utilized. The budget will also be a part of the decision-making process, but will not be specifically addressed by this guideline. The intent is that vehicle replacement guidelines will impact the fleet replacement budget, rather than the budget impacting vehicle replacement guidelines.

## Appendix 4: Vehicle Disposal Guidelines:

### **VEHICLE DISPOSAL GUIDELINES**

The Hawaii Fire Department vehicle disposal process typically involves a few steps to ensure compliance with other sections in the County. Here are the general steps involved:

1. Vehicle Assessment
  - a. The Chief Mechanic assesses the condition of the vehicles in the fleet to determine if it is still serviceable or no longer needed. Utilizing the data acquired from the HFD Apparatus Replacement Plan will play a factor to this decision also.
2. Approval Process
  - a. The Chief Mechanic will consult with Fire Auxiliary Services Office to confirm all vehicles identified to be removed from inventory.
  - b. HFD will then inform County Property Management of all vehicles identified for disposal/auction and request approval.
3. Auction or Disposal
  - a. The Fire Maintenance Shop will prep the vehicles by removing all emergency lighting, sirens and radios. Any Fire Department insignifying badging or lettering will be removed also.
  - b. If the vehicle has resale value, County Property Management will schedule a public auction. All funds from sale currently will go back to the County's general fund.
  - c. If the vehicle cannot be resold, County Property Management will contract a certified disposal company to ensure proper handling of the hazardous substances.
4. Documentation and Record Keeping
  - a. Throughout the process, all steps, including the sale or disposal, will be properly documented. This ensures the transparency of, accountability and compliance of the County's budget and legal requirements.