



# **Truckee Meadows Fire & Rescue Fleet Summary**



**April 2021**

# VEHICLE REPLACEMENT PLANNING

Below is an excerpt from the National Fire Protection Agency Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles (NFPA 1911). This standard guides the TMFR Apparatus Committee in the decision whether to refurbish or replace an apparatus. This recommendation is only a portion of the process taken to ensure fiscal responsibility.

## **NFPA 1911 APPENDIX D.5: REFURBISHING OR REPLACING FIRE APPARATUS**

*The technical committee cautions fire department administrators and fire chiefs to exercise extra care when evaluating the cost of refurbishing or updating existing fire apparatus versus the cost of new fire apparatus.*

*The committee provides objective criterion for fire administrators and fire chiefs to use when conducting their cost-benefit analysis of the value of upgrading or refurbishing a piece of fire apparatus.*

*Here are six questions the committee members say should be part of that analysis.*

- 1. What is the true condition of the existing apparatus?*
- 2. What technology advances for improved safety, effectiveness and efficiency does the fire apparatus lack?*
- 3. Does the incumbent fire apparatus still meet its original operational needs?*
- 4. If refurbished, how will the fire apparatus compare to new fire apparatus for its level of safety and operational capabilities?*
- 5. How will the anticipated yearly cost to operate for a refurbished unit compare to that of a new fire apparatus?*
- 6. Is there a current trade-in value for the incumbent apparatus that might not be there in the future?*

There are many different options for replacement plans such as years of service, point systems, cost to maintain, etc. TMFR has been using a hybrid system which includes years of service and cost of vehicle. Additional considerations include engine hours, accumulated mileage, cost of maintenance, parts availability, safety features (antilock brakes, airbags, seat belts, collision avoidance), overall advances in technology, and life cycle cost. All these factors are used to ensure that the residents of the District have reliable and the best suitable apparatus responding to their emergency.

Below is our “Years of Service” model which incorporated all the factors above during its creation.

## **TYPE 1 FIRE ENGINES**

Primary response vehicle equipped with firefighting, vehicle extrication, low angle rope rescue, water/ice rescue, and advanced life support (ALS) equipment. Generally limited to improved (paved / maintained gravel) roads. A Type 1 Engine has a 750-gallon tank capacity and is capable of pumping 1500 gallons per minute.



- 10 years frontline service in a career station
- 10 years reserve status or volunteer

These numbers were placed do to the “severe duty” in which these Fire Engines are used. This also considers the planned obsolescence of most technological items on these pieces of equipment.

## **AERIAL APPARATUS**

The truck has a 100-foot aerial platform used for fighting large scale fires and accessing roofs of commercial or tall residential structures. It also carries additional special rescue equipment to aid in vehicle extrication, ventilation, and other rescues. It carries 250 gallons of water and is capable of pumping 2,000 gallons per minute.

- 15 years frontline service
- 10 years reserve status

Due to the increased cost of apparatus such as a ladder truck, the frequency in which this piece of equipment is used and to stay within national standards TMFR has planned the service life of aerial apparatus at the above timeline. In 2019 TMFR purchased an aerial from Chesterfield County, VA which at the time was 11 years in frontline service. This was purchased to allow TMFR to become familiar with the operation of an aerial without learning on a new piece of equipment. The 15-year service life of this apparatus will be up in 2023.





## **TYPE 3/5 APPARATUS**

Four-wheel drive capable and typically carrying 400+ gallons of water and specialized wildland firefighting equipment, these trucks are designed to get into remote places and carry up to four fire fighters.



- 15 years frontline in a career station
- 10 years reserve or volunteer

These numbers were placed do to the “severe duty” in which these Brush Engines are used. This also considers the planned obsolescence of most technological items on these pieces of equipment. The reason that these Brush Engines are in frontline service for an additional 5 years is due to the frequency of these vehicles responding to incidents.

## **WATER TENDERS**

Water trucks with 2,000 – 3,500 gallons of water respond to fires to provide consistent water supply to other fire engines and aircraft. They can respond with one or two fire fighters.

- 20 years frontline in a career station
- 10 years reserve or volunteer



These numbers were placed do to the “moderate duty” in which these water tenders are used. This also considers the planned obsolescence of most technological items on these pieces of equipment.

## **LIGHT DUTY VEHICLES**

Due to the differences in how these pieces of equipment are used, it was decided to base this more off mileage and cost to repair. Vehicles such as Battalion Chief vehicles are considered “severe duty,” whereas a service vehicle at a station is considered

“regular duty.” BC vehicles drive anywhere from 12,000-20,000 miles a year based on call volume and other related duties. For this reason, we developed the plan below to extend the life of these medium and light duty vehicles.

- $\frac{3}{4}$  Ton Off-Road Medium Duty
  - 80,000 miles or 8 years whichever comes first frontline service
  - 10-12 years station utility vehicle/plow vehicle.
- $\frac{1}{2}$  Ton Off-Road Light Duty
  - 100,000 miles or 10 years, whichever comes first frontline service
  - 10 years station utility/reserve support vehicle



## **AMBULANCE**

This apparatus has a varying service life that is largely dependent upon mileage. The ambulances may drive up to 17,000 miles per year based on call volume and operate in continuous stop and go traffic. These units carry patients to the hospital and have equipment (fire extinguisher, hand tools) to initiate mitigation efforts should it arrive before a Fire Engine.



- 80,000 miles or 8 years whichever comes first frontline service
- 10-12 years reserve status

# VEHICLE INVENTORY OVERVIEW

The District owns 171 pieces of “rolling stock.” Rolling stock is defined as any piece of equipment, apparatus, or vehicle that can be moved under its own power or to be towed. There are 101 apparatus and vehicles that fall under the vehicle replacement plan. Others are trailers, UTV’s, Bulldozers w/ transport, trailers, woodchippers, etc. which evaluated on a case by case as needed basis.

<u>Description</u>	<u>Owned Quantity</u>
Type I Fire Engine*	25
Type III Brush Engine	17
Type V/VI Brush Engine	9
3/4 Ton Command Style	27
1/2 Ton Command Style*	20
Ambulance	2
Ladder Truck	1
Total	101
*Includes 5 new apparatus arriving April 2021 and 4 apparatus to be sold as Surplus	
**Includes 4-door Sedan	

## **TYPE 1 FIRE ENGINES**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD0502	INTL	7400 TFT	1995	Station 300 - South Valleys West	Engine 300
FD0525	INTL	4800	1995	Station 320 - South Valleys East	Engine 320
FD5007	INTL	4800 TSP	1995	Station 400 - Verdi	Engine 400
FD0518	INTL	FIRE	1996	Station 450 - Palomino Valley	Engine 450
FD0035	PIERCE	ARROW	2006	Reserve Station - Warehouse	Reserve Engine 3 @ WH
FD0046	PIERCE	QUANTUM PUMPER	2007	Reserve Station - Warehouse	Reserve Engine 1 @ WH
FD0045	PIERCE	QUANTUM PUMPER	2007	Reserve Station - Warehouse	Reserve Engine 2 @ WH
				Reserve Station 360 - Mt Rose	
FD0505	PIERCE	CONTENDER	2008	Hwy	Reserve Engine 1 @ 360
FD0516	PIERCE	CONTENDER	2008	Reserve Station 460 - Peavine	Reserve Engine 1 @ 460
FD5037	PIERCE	DASH	2008	Station 30 - West Washoe Valley	Engine 30
FD0019	PIERCE	ARROW XT	2008	Station 36 - Arrowcreek	Engine 36
FD5036	PIERCE	DASH	2008	Station 37 - Hidden Valley	Engine 37
FD0101	PIERCE	ARROW XT	2013	Station 33 - Foothill	Engine 33
FD0102	PIERCE	SABER	2013	Station 39 - Galena Forest	Engine 39
FD0100	PIERCE	ARROW XT	2013	Station 44 - Stead	Engine 44
FD0103	PIERCE	ARROW XT	2014	Station 42 - Cold Springs	Engine 42
FD0104	PIERCE	ARROW XT	2014	Station 45 - Sun Valley	Engine 45
FD0105	PIERCE	ARROW XT	2015	Station 46 - Spanish Springs	Engine 46
FD0117	PIERCE	QUANTUM PUMPER	2019	Station 32 - East Washoe Valley	Engine 32
FD 0116	PIERCE	DDC	2019	Station 40 - Verdi/Mogul	Engine 40
FD0120	PIERCE	QUANTUM PUMPER	2020	TBD - New 2021	
FD0121	PEIRCE	QUANTUM PUMPER	2020	TBD - New 2021	
FD0122	PEIRCE	QUANTUM PUMPER	2020	TBD - New 2021	
FD0123	PEIRCE	QUANTUM PUMPER	2020	TBD - New 2021	
FD0124	PEIRCE	QUANTUM PUMPER	2020	TBD - New 2021	

Total Units 25  
 Average Year 2010  
 Oldest Unit 1995  
 Newest Unit 2020

\*\*Includes 5 new apparatus arriving April 2021

\*\*\*Includes 4 apparatus to be sold as surplus FY22

### **TYPE 3 BRUSH ENGINES**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD5015	INTL	4800	1996	Station 450 - Palomino Valley	Brush 450
FD5016	INTL	4800	1996	Station 400 - Verdi	Brush 400
FD5021	INTL	4800	1997	Station 300 - South Valleys	Brush 300
FD0014	INTL	7400 PUMPER	2004	Reserve Station - Warehouse	Reserve Brush 1 @ WH
FD0015	INTL	7400 PUMPER	2004	Warehouse	Reserve Brush 2@ WH
FD0016	INTL	7400 PUMPER	2004	Station 30 - West Washoe Valley	Brush 30
FD5009	INTL	7400 PUMPER	2004	Station 430 - Silver Knolls	Brush 430
FD5033	INTL	7400 PUMPER	2004	Reserve Station 460 - Peavine	Reserve Brush 1 @ 460
FD5034	INTL	7400 PUMPER	2004	Reserve Station 360 - on Mt Rose Hwy	Reserve Brush 1 @ 360
FD0500	INTL	7400 PUMPER	2005	Station 36 - Arrowcreek	Brush 36
FD0545	INTL	7400 PUMPER	2005	Warehouse	Reserve Brush 3 - WH
FD0043*	INTL	7400 PUMPER	2006	Station 32 - East Washoe Valley	Brush 32
FD0044*	INTL	7400 PUMPER	2007	Station 40 - Verdi/Mogul	Brush 40
FD0063*	INTL	7400 PUMPER	2009	Station 44 - Stead	Brush 44
FD0106	PIERCE	FREIGHTLINER	2015	Station 42 - Cold Springs	Brush 42
FD0107	PIERCE	FREIGHTLINER	2015	Station 33 - Foothill	Brush 33
FD0108	PIERCE	FREIGHTLINER	2015	Station 46 - Spanish Springs+A1:F25	Brush 46

Total Units	17
Average Year	2005
Oldest Unit	1996
Newest Unit	2015

\*Refurbished in FY19/20 to extend frontline service



## **TYPE 5 BRUSH ENGINES**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD0226	FORD	F350 4X4	1999	Station 450 - Palomino Valley	Utility 450
FD5042	FORD	F550	2005	Lemmon Valley - Fuels Division	Mount Rose 2
FD0507	DODGE	RAM 5500	2008	Station 430 - Silver Knolls	Patrol 430
FD0510	DODGE	RAM 5500	2008	Station 320 - South Valleys	Patrol 320
FD0515	DODGE	RAM 5500	2008	Lemmon Valley - Fuels Division	Mount Rose 4
FD0128	FORD	F550	2018	Station 45 - Sun Valley	Brush 45
FD0127	FORD	F550	2019	Station 37 - Hidden Valley	Brush 37
FD0125	FORD	F550	2020	Station 37 - Fuels Division	Mount Rose 3
FD0126	FORD	F550	2020	Station 39 - Galena Forest	Brush 39

Total Units	9
Average Year	2012
Oldest Unit	1999
Newest Unit	2020

## **WATER TENDER**

<b>ID #</b>	<b>Make</b>	<b>Model</b>	<b>Year</b>	<b>Station / Location</b>	<b>Unit Call Sign</b>
FD0170	FREIGHTLINER	WATER TENDER	1989	Station 450 - Palomino Valley	WT 450
FD0182	FREIGHTLINER	WATER TENDER	1990	Station 42 - Cold Springs	WT 42
FD0174	FREIGHTLINER	WATER TENDER	1990	Station 45 - Sun Valley	WT 45
FD5050	INTL	4800	2000	Station 400 - Verdi	WT 400
FD5068	INTL	7408 Pumper	2006	Warehouse	In Repair
FD5059	INT. 5900	Caterpillar C13 Acert	2006	Station 36 - Arrowcreek	WT 36
FD0040	FREIGHTLINER	CONVENTION TTM	2006	Station 44 - Stead	WT 44
FD0041	FREIGHTLINER	CONVENTION TTM	2006	Station 46 - Spanish Springs	WT 46
FD0511	PIERCE	Kenworth	2009	Station 430 - Silver Knolls	WT 430
FD0112	FREIGHTLINER	WATER TENDER	2016	Warehouse	In Repair
FD0110	FREIGHTLINER	WATER TENDER	2017	Station 32 - East Washoe Valley	WT 32
FD 113	FREIGHTLINER	WATER TENDER	2017	Station 33 - Foothill	WT33
FD0109	FREIGHTLINER	WATER TENDER	2017	Station 40 - Verdi/Mogul Station 30 - West Washoe	WT 40
FD0129	FREIGHTLINER	WATER TENDER	2020	Valley	WT 30

Total Units	14
Average Year	2006
Oldest Unit	1989
Newest Unit	2020

### **3/4 TON OFF-ROAD MEDIUM DUTY**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD5011	CHEVROLET	3500 4X4	1990	Station 30 - West Washoe Valley	Utility 30 (SNOW PLOW)
FD0222	FORD	F350 4X4	1996	Station 40 - Verdi/Mogul	Utility 40 -(towing)
FD0227	Ford	F350	1999	Station 240 - Red Rock	Squad 240
FD0229	FORD	F350 4X4	1999	Station 40 - Verdi/Mogul	Utility 40 (SNOW PLOW)
FD0228	FORD	F350 4X4	1999	Station 45 - Sun Valley	Hydrant 45 (SNOW PLOW)
FD0231	FORD	PICK UP	2000	Station 42 - Cold Springs	Utility 42 (SNOW PLOW)
FD0029	CHEVROLET	1500 4x4	2000	Station 46 - Spanish Springs	Dozer Chase Truck
FD5013	FORD	F250	2004	Station 39 - Galena Forest	Utility 39 (SNOW PLOW)
FD5012	DODGE	RAM 3500	2005	Fuels Division	Mount Rose 1
FD5008	DODGE	RAM 3500	2005	Station 30 - West Washoe Valley	Dozer Chase Truck
FD0542	CHEVROLET	3500 4X4	2005	Station 44 - Stead	REMS Utility
FD0038	CHEVROLET	SILVERADO	2007	Command & Training	Training Captain
FD0051	DODGE	RAM 3500	2007	Station 36 - Arrowcreek	Utility 36 (SNOW PLOW)
FD5004	CHEVROLET	SILVERADO	2009	Command & Training	Training Captain
FD0002	CHEVROLET	SILVERADO	2013	Command & Training	Battalion Chief
FD0003	CHEVROLET	SILVERADO	2013	Station 45 - Sun Valley	Reserve Battalion Chief
FD0004	CHEVROLET	SILVERADO	2014	Command & Training	Division Chief Operations
FD0005	CHEVROLET	SILVERADO	2014	Command & Training	Battalion Chief
FD0006	CHEVROLET	SILVERADO	2014	Command & Training	Training Captain
FD0007	CHEVROLET	SILVERADO	2014	Warehouse	Logistics Coordinator
FD0008	CHEVROLET	SILVERADO	2014	Warehouse	Fleet Manager
FD0009	CHEVROLET	SILVERADO	2015	Command & Training	Battalion Chief
FD0010	CHEVROLET	SILVERADO	2015	Command & Training	Battalion Chief
FD0011	CHEVROLET	SILVERADO	2015	Command & Training	Battalion Chief
FD0017	CHEVROLET	SILVERADO	2016	Command & Training	Division Chief Training
FD0018	CHEVROLET	SILVERADO	2016	Command & Training	Division Chief Fuels
FD0025	CHEVROLET	SILVERADO	2018	Command & Training	Battalion Chief

Total Units 27  
Average Year 2008  
Oldest Unit 1990  
Newest Unit 2018

(SNOW PLOW) 6 units are equipped for snow removal

## **1/2 TON OFF-ROAD LIGHT DUTY**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD0246	FORD	F150	2003	Station 36 - Arrowcreek	Academy Cadre
FD0241	GMC	YUKON	2003	Station 37 - Hidden Valley	Utility 37
FD0245	FORD	F150	2003	Station 44 - Stead	Utility 44
FD0247	CHEVROLET	SILVERADO 1500	2003	Station 440 Lemmon Valley	Fuels Division
FD5003	CHEVROLET	TAHOE	2005	Station 440 Lemmon Valley	Academy Cadre
FD0042	CHEVROLET	TAHOE	2007	Special Assignments	Special Events 1
FD0037	CHEVROLET	TAHOE	2007	Staff Vehicle	Public Information Officer
FD5054	CHEVROLET	TAHOE	2007	Station 32 - East Washoe Valley	Utility 32
FD0036	CHEVROLET	TAHOE	2007	Station 36 - Arrowcreek	Utility 36
FD5055	CHEVROLET	TAHOE	2007	Station 46 - Spanish Springs	Utility 46
FD0061	CHEVROLET	TAHOE	2008	Staff Vehicle	EMS Coordinator
FD5066	CHEVROLET	TAHOE	2008	Station 30 - West Washoe Valley	Utility 30
FD0062*	CHEVROLET	IMPALA	2008	Staff Vehicle	Little Red
FD0022	CHEVROLET	SILVERADO 1500	2017	Staff Vehicle	Fire Prevention Specialist
FD0023	CHEVROLET	SILVERADO 1500	2017	Staff Vehicle	Fire Prevention Specialist
FD0024	CHEVROLET	SILVERADO 1500	2017	Staff Vehicle	Fire Prevention Specialist
FD0026	CHEVROLET	TAHOE	2019	Command & Training	Deputy Chief Prevention
FD0027	CHEVROLET	TAHOE	2019	Command & Training	Division Chief EMS
FD0028	CHEVROLET	TAHOE	2019	Command & Training	Deputy Chief Operations
FD0030	CHEVROLET	TAHOE	2020	Command & Training	Fire Chief
Total Units			20		
Average Year			2010		
Oldest Unit			2003		
Newest Unit			2020		

\* 4-door sedan

## **AMBULANCE**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD0115	FORD	F350 - AMBULANCE	2005	Station 30 – West Washoe Valley	Medic 30
FD0118	NORTH STAR	AMBULANCE	2018	Station 45 – Sun Valey	Medic 45

Total Units	2
Average Year	2012
Oldest Unit	2005
Newest Unit	2018

## **LADDER TRUCK**

<b><u>ID #</u></b>	<b><u>Make</u></b>	<b><u>Model</u></b>	<b><u>Year</u></b>	<b><u>Station / Location</u></b>	<b><u>Unit Call Sign</u></b>
FD0119	PIERCE	DASH	2008	Station 33 - Foothill	Ladder 33

Total Units	1
Average Year	2008
Oldest Unit	2008
Newest Unit	2008