



Fire Service Master Plan
2018 -2022

ADOPTED – 12/08/17

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Introduction

The purpose of the Fire Service Master Plan (FSMP) is to inform the Board of Directors, the General Manager and the Community about the current level of service for the Kirkwood Volunteer Fire Department (KVFD), assess future needs, and describe potential sources to fund those needs. The FSMP will guide future decisions for the improvement and development of KVFD.

The original Fire Service Master Plan was adopted by the Kirkwood Meadows Public Utility District's (District) Board of the Directors in April 1998. At that time, the Fire Service Master Plan presented several recommendations for improvements to KVFD's operations, staffing and possible funding measures with a suggested review and revision every three years, or as needed. Since that time, the District has implemented several of the recommendations from the original FSMP but the suggested growth projections for development have not been realized. The revision of the FSMP is now necessary to inform and assist the Board of Directors and General Manager with information for decision making to ensure adequate funding is available for operational needs and future capital improvements for KVFD.

This document provides a five year forecast of anticipated needs and solutions, but also looks further in the future. It is anticipated this document will be updated every five years, with the next update being in 2023.

Section I Existing Conditions

District Description / Service Area

The Kirkwood Volunteer Fire Department is located in a small, remote, mountain community in Kirkwood California, whose service area is geographically located within three counties: Alpine, Amador and El Dorado. The community covers approximately three-square miles and has a permanent population estimated at 158¹ and recent day use population between 8,000 and 9,000 during the winter season. When the Kirkwood Ski Resort is generally open from November through April, where the day use population for public and private lands maximum is 11,800². Further, at build-out during the winter, the potential maximum overnight population is approximately 6,558².

Kirkwood's service area is south of Lake Tahoe, east of Silver Lake, west of Caples Lake and the elevations served range from 7,200 to 9,800 feet. Due to its high elevation, Kirkwood is prone to extreme weather conditions that can be both the cause of and the impediment to service response.

Access to Kirkwood is by vehicle using one California Scenic Highway, State Route 88, which runs east from Stockton California to the Nevada State line. The availability of resources from outside the community is dependent entirely on this lone highway which can be closed several times a year, several days at a time, due to snow storms, avalanches, rock slides and flooding. This is a heavily traveled route to Lake Tahoe, which results in demands for service response not typically found in rural districts. These demands include calls from the California Highway Patrol for assistance with traffic control, vehicle accidents, hazardous spills, medical assistance and fire suppression needs.

The KVFD is also called upon to respond to all types of emergency calls within Kirkwood valley and surrounding areas including medical calls, structure and wild land fires, and hazardous material spills

¹ 2010 United States Census Bureau

² 2003 Kirkwood Specific Plan - Alpine County Ordinance No. 648-03 Exhibit A Page 30

Fire service is generally provided within Kirkwood, which encompasses approximately 5 square miles. The KVFD is also called upon to provide automatic and mutual aid to surrounding fire service providers, thus extending the actual service area approximately 7 miles east to Carson Pass in Alpine County and 7 miles west to Tragedy Springs in Amador County, for an actual service area of approximately 27 square miles which includes structures at Silver Lake, Lake Kirkwood and Caples Lake.

The response area includes commercial and residential buildings, skiing facilities, municipal water, wastewater, and electric generation facilities, and private and public fuel storage facilities. An increasing percentage of Kirkwood is occupied by medium to high-density residential units. Suggested future growth indicates this pattern of land use will continue.

KVFD is reviewed by the Insurance Services Office (ISO) a third party independent agency that uses a Protection Program Classification (PPC) that rates the fire department, the water system and overall communications system on a one to ten scale (one being the best or highest). This PPC information is used by most U.S. insurers in their decision-making process and plays an important role in the underwriting process with insurance companies when deciding insurance premiums for residences and businesses. The KVFD currently has a Class 4 ISO rating.

KVFD provides Basic Life Support (BLS) Emergency Medical Services with the use of an Alpine County Ambulance that is stationed at the KVFD fire station. Patients transported by KVFD are then transferred to higher level of care (Advanced Life Support - ALS) providers. In Amador County, American Legion Post is the ALS ambulance provider, while in Alpine County, El Dorado Emergency Medical Services is the ALS ambulance service provider.

Existing Facilities / Fire Station

The existing fire department facilities are located within the Community Service Building (CSB) at 33540 Loop Road, Kirkwood, CA and was built in 2000 to accommodate the fire department's current and anticipated future needs. Below is a list of needs that were considered at the time of the facilities design, and the current status of these items.

- Volunteer Fire department facility location for response times
 - The CSB is centrally located within the Kirkwood Valley and other facilities are not anticipated.
- Back up emergency electrical power
 - The facility has redundant power generation with existing utility infrastructure.
- Communication system
 - The facility is equipped with Internet, AM Emergency Notification System, VHF Radio System and Pager System. Further the Volunteer Fire Department utilizes the existing radio / repeater systems in the counties surrounding Kirkwood.
- Training space and Audio-Visual Equipment
 - The CSB has two conference rooms and the fire bay that can be used for meetings, training and command center if needed.
- Emergency vehicle / apparatus space

- The facility has enough room for up to six firefighting apparatus.
- Employee Housing
 - The District Employee Housing facility has eight units.



- Storage
 - The CSB has adequate storage.
- Administrative / office space
 - The CSB has adequate administrative space to meet the needs of the volunteer fire department.



Community Service Building / Fire Station

Kirkwood Volunteer Fire Department Service Capability

The fire department’s existing apparatus consists of two Type 1 pumpers, both capable of delivering 1250 (gpm) of water. E-93 is the front-line apparatus and is now 10 years old and is in good condition. E-193 is the reserve apparatus and is now 30 years old and still in fair condition, but will need significant repairs to make it road worthy. The fire department also has access to several other utility type vehicles that it shares with the other District departments.

Table 1 Existing Apparatus

E-93	2006	HME Rosenbauer – Type 1 Engine (500-Gallon Tank / 1250gpm)
E-193	1986	GMC “Wild Cat” – Reserve Type 1 Engine (500-Gallon Tank / 1250gpm)
A-8	2006	Ford F-550 XL Super duty- BLS Ambulance (owned by Alpine County EMS)
R-3	1993	Chevy Crew Cab 4x4 3500 – Pickup truck with storage box (Shared)
U-93	2000	Ford Expedition – Utility / Command Vehicle (Shared)
U-193	1996	Ford Bronco XL – Utility Vehicle (Shared)

Staffing / Volunteers

The KVFD has a Fire Chief, who directs volunteer Captains and firefighters. Historically, there have been less than a handful of volunteers who do not work for the District in some other capacity. Currently there are three District employees who also volunteer with KVFD. During the winter months, the fire department historically gains one or two additional volunteers, but additional volunteer support is not guaranteed from year to year. Also, due to low numbers of KVFD volunteers available, the fire department is augmented by other District staff during normal business hours. As a result of the high winter day-use population, winter staffing is critical.

On-Call System

To ensure the Fire Department has at least two people respond to an emergency call, the District has developed an On-Call schedule and pays the volunteers a small stipend to cover fire department emergency calls.

Training

The members of KVFD are trained by the Fire Chief and Captains on essential firefighting and EMS operations. This training is conducted weekly and includes specialty training with outside instructors. More comprehensive, skilled training is also received at times with the support of Eastern Alpine County and Lake Valley Fire Protection District. Volunteers are also encouraged to seek additional formal training for Structure Firefighting, Wildland Firefighting and EMS that is offered nearby at Lake Tahoe Community College.

Other Agencies Capability / Automatic and Mutual Aid

Automatic and Mutual Aid (Emergency response from other nearby fire departments) is available from fire agencies and emergency medical service providers (EMS) surrounding the Kirkwood area. Because Kirkwood is in three counties, the resource capabilities of these responding agencies will vary. Typically, Automatic or Mutual Aid responses from these agencies will include a Chief Officer, a Type 1 fire apparatus and an advanced life support (ALS) ambulance.

In the Alpine County portion of Kirkwood. The agencies that respond are, Eastern Alpine County Fire Department, Lake Valley Fire District, California Department of Forestry and Fire Protection (Cal Fire) and the United States Forestry Service.

In the Amador County areas within Kirkwood. The agencies that respond are, Amador Fire Protection District, Cal Fire and the United States Forestry Service.

Lake Valley Fire Protection District and Eastern Alpine County Fire Department are the primary automatic aid partners for structure fires in Alpine County.

It should also be noted that USFS and Cal Fire increase their staffing levels during the summer months. Also, for all mutual aid responses, response times can be delayed significantly due to road closures in the winter, chain control requirements on the highway, availability of resources due to other emergency activities.

Communications / Dispatching

All fire providers communicate through the same radio system. The Kirkwood Volunteer Fire Department can communicate with other providers with shared radio frequencies. When KVFD is dispatched to an emergency, the first unit to arrive on scene is responsible for assuming incident command. The first responder will also determine if there is sufficient personnel and equipment for the emergency. For all vehicle / traffic related incidents within Kirkwood and on Highway 88, the California Highway Patrol will assume the incident command.

All 911 calls made from phones using landlines in Amador County are automatically routed to the Amador County Sheriffs communication center to the public safety answering point (PSAP) in Jackson, California. Cell phone generated 911 calls are answered by the California Highway Patrol in Stockton, and then are routed to the Sheriff's Office to CALFIRE's Camino Interagency Command Center, which in turn dispatches Kirkwood Volunteer Fire Department and other appropriate local jurisdiction responders. In Alpine County 911 calls are automatically routed to Douglas County PSAP Communication Center, which in turn dispatches the Kirkwood Volunteer Fire Department along with the appropriate local jurisdiction responders.³

Water Supply

There are four ground water wells within Kirkwood (Wells 2, 3,4 and 5) which supply water to two water storage tanks that have storage capacity of 950,000-gallons. This amount of water can meet fire flow requirements of 3,500 gpm for a period of four hours (totaling 840,000 gallons)⁴ during non-peak or summer months. (May - October). However, during peak times in the winter, (November – April) the water supply is deficient by as much as 161,250 gallons due to the high day-use population.

³ Amador LAFCO Municipal Service Review for Amador County

⁴ KMPUD All Services Capacity Analysis 9.6.1, 2, Table 9.4

Also, the commercial area on the north side of Hwy 88 near and around the Kirkwood Inn and Cross-Country Center lacks water supply sufficient for fire flow. In this area, fire flow is provided by shuttling water from the closest fire hydrant water supply located at the intersection of Merrill Drive and Kirkwood Meadows Drive.

Historical Call Volume

Below is a summary of the Volunteer Fire Departments calls from 2006 - 2016

Historical Call Volume Summary (All Calls)

Type of Calls	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MEDICAL	71	54	49	42	47	47	43	42	34	44	71
ALARM	53	38	50	32	57	51	48	35	41	56	56
FIRE / RESCUE	28	36	40	54	47	47	43	25	40	42	30
Total	152	128	139	128	151	145	134	102	115	142	157

Historical Call Volume Summary – (Alarm Only)

Fire Alarm	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PROPANE / CO DETECTION	12	3	11	5	15	12	10	9	22	13	12
PULL STATION	0	1	0	0	0	1	1	3	1	2	1
SMOKE DETECTOR	21	11	15	9	13	9	17	7	7	21	11
FALSE ALARM – HUMAN CAUSE	5	10	15	8	13	5	6	5	3	5	7
SPRINKLER / WATER FLOW	6	8	2	6	7	9	2	6	3	7	16
FALSE ALARM – UNKNOWN CAUSE	9	5	7	4	9	15	12	5	5	8	9
Total	53	38	50	32	57	51	48	35	41	56	56

Historical Call Volume Summary – (Fire / Rescue Only)

Fire and Rescue	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
STRUCTURE FIRE	2	0	0	1	1	1	2	0	1	2	1
DUMPSTER FIRE	2	2	0	1	0	0	0	1	0	1	0
WILDLAND FIRE	5	1	1	1	6	1	2	3	0	0	1
CAR FIRE	0	0	0	0	0	0	0	2	1	2	4
REPORT OF SMOKE / OTHER FIRE	4	13	5	2	3	3	4	7	4	1	3
PROPANE LEAK	6	3	2	0	2	1	0	1	1	1	0
HAZARDOUS MATERIAL SPILL	0	0	3	1	2	0	0	0	0	0	1
SEARCH AND RESCUE	1	2	1	1	3	2	1	0	1	4	1
ELEVATOR	2	3	0	0	1	0	0	1	0	0	1
STANDBY / AIR AMBULANCE	5	1	3	6	4	1	14	4	12	9	2
UNKNOWN PAGE	1	4	11	12	12	18	3	1	2	2	9
TRAFFIC ACCIDENT NON-INJURY	-	7	14	29	13	20	17	5	18	20	9
Total	28	36	40	54	47	47	43	25	40	42	30

Call Location by County Summary – (Fire / Rescue Calls Only)

Location of Calls	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Alpine County	116 79%	95 74%	109 78%	94 73%	126 83%	118 81%	100 74%	76 75%	86 75%	121 85%	126 88%
Amador County	34 20%	33 23%	26 19%	31 24%	25 17%	27 19%	32 24%	26 25%	29 25%	21 15%	29 20%
El Dorado County	2 1%	4 3%	3 2%	3 2%	2 1%	0 0%	2 1%	0 0%	0 0%	0 0%	2 1%

Current Fire Budget (2018–2022)

The below table shows the 2018 Volunteer Fire Department Budget, which shows an anticipated 58% increase in revenues from 2018-2019, to cover department losses. Thereafter, the budget shows an incremental increase of 1% in revenues annually. The method for achieving the increase for 2019 will be selected from one or more of the alternatives discussed later in this Plan.

Operational Budget	2018	2019*	2020	2021	2022
REVENUES					
Fire	115,000	182,112	183,933	185,772	187,630
LESS EXPENSES					
Salaries and Wages	22,875	23,103	23,334	23,568	23,803
Payroll Taxes & EE Benefits	14,143	14,285	14,428	14,572	14,718
Operating Expenses	56,100 ⁵	56,661	57,228	57,800	58,378
G&A Allocation Expense	125,391	126,645	127,912	129,191	130,483
KMPUD Interfund Allocation	17,310	17,483	17,658	17,835	18,013
Depreciation	27,600	27,700	28,000	28,350	29,950
TOTAL OPERATING EXPENSES	263,419	265,877	268,560	271,316	260,627
NET INCOME (LOSS)	(148,419)	(83,765)	(84,627)	(85,544)	(72,997)
EXPENSES IN EXCESS OF REVENUES					
EXCLUDING DEPRECIATION	(120,819)	(56,065)	(56,627)	(57,194)	(43,047)

⁵Includes volunteer expenses.

Current Fire Department Obligations

The Fire Department has no long-term debt. Existing Mutual Aid Contracts with Amador and Alpine Counties are being negotiated for renewal

Section II Future Growth and Services

Load Projections

As a reference for Load Projections, in 2003 the Kirkwood Specific Plan was developed as the principal document to establish goals, objectives and policies for the development of private lands within the Kirkwood Community. At buildout, the Specific Plan estimates there will be 1,413 Single Family, Multi-Family Residential and Commercial units with a peak overnight population of 6,558 overnight visitors.⁶ The projected number of Single Family, Multi-Family Residential and Commercial units at build-out represents an increase of 649 over existing.

Table 6 – Development Program Summary for Residential and Commercial Zones

Zoning Designation	Current Units	Total Projected Units at Buildout
Single Family / Duplex	248	392
Multi-Family Residential with Commercial	437	1021
Total	728	1413

Table 7 – Kirkwood Specific Plan: Peak Overnight Population Estimate⁷

Units	Units (Est)	BR's (Est)	Avg. Bed/ Bedroom	Avg. Pillow/ Bed	Peak Day Occupancy Rate	Population @ 100% Pill
Single Family	392	3.2	1.0	1.8	95%	2258
Studio	111	1	1.2	1.8	95%	240
1 Bedroom Condo	372	1	1.2	1.8	95%	804
2 Bedroom Condo	349	2	1.2	1.8	95%	1508
3 Bedroom Condo	142	3	1.2	1.8	95%	920
4 Bedroom Condo	44	4	1.2	1.8	95%	380
Service	3	1	1.2	1.8	95%	7
Total	1413					6117

⁶ 2003 Kirkwood Specific Plan – P. 30, 31

To help determine future growth projections for this Fire Master Plan, data was considered from the 2012 KMPUD All Service Capacity Analysis report prepared by Matt Wheeler. Within this report, equivalent dwelling units (EDU's) were considered for future development along with using the number of existing water meter connections as a measuring tool to assume linear growth for load predictions.

As shown in Table 8, the number of existing water meter connections for both residential and commercial water meters in November 2017 is 685⁷.

Table 8

Type of Connection	Number of Connections
Residential	634
Commercial / Institutional	51
Total	685

Based on this data, the Kirkwood community would reach build-out (1413 water meter connections) well beyond the year 2045 at a 1% compounded annual growth.

Section III Replacement and Future Fire Department Needs

Equipment Replacement Needs

To ensure the volunteer fire department can respond to incidents in a reliable apparatus, and meet the needs for future growth, the District shall establish an apparatus replacement schedule that considers both historic and anticipated annual call volume.

With consideration of apparatus current condition and KVFD's annual call volume, the District will need to replace the 2006 HME E-93 Type -1 pumper in the year 2026 when the apparatus reaches 20 years of service life. At that time, E-93 would be moved to reserve status and the 1986 GMC Wildcat E-193 be removed from service.

⁷ (Does not include the existing 179 irrigation meters)

Replacement Needs	Cost ⁸	Cycle	Estimated Implementation	Source of Funding
Replacement Component Apparatus				
Type 1 Pumping Apparatus (E-93 Replacement)	\$950,000	20 Year Service Life	2026	Grants Annual Assessment Fundraising Property Taxes
Miscellaneous Equipment (PPE, Hose, Radios, Etc.)	\$1,000-9,500	End of Service Life	Annually	Annual Assessment Fundraising Grants

Kirkwood Valley currently has several structures that are over 3 stories in height, and such structures need a ladder truck for fire/rescue.

Future anticipated construction will only exacerbate the need for, at a minimum, a 110-foot quint ladder truck and light command/rescue vehicle.

Anticipated Needs	Cost ⁸	Cycle	Estimated Implementation	Source of Funding
110' Ladder Truck	\$1,500,000	End of Service Life	2026	Fire Impact Fees Grants
Rescue/Command Vehicle (w/300 Gallon Water Tank)	\$125,000	End of Service Life	2022	Fire Impact Fees Grants
Employee Housing (2 Units)	\$350,000	When EDU's increase by 300	2027	Fire Impact Fees

Infrastructure

Potable water storage capacity is governed by three variables; operational storage, emergency storage, and fire flow storage. Operational and emergency storage are governed by the 2003 Kirkwood Specific Plan and are currently 43,750 and 227,500 gallons respective. The fire flow should be designed to meet the Insurance Services Office requirements, and the previous FSMP set the fire flow value at 3,500 gpm for 4 hours, or 840,000 gallons of storage for fire flow. The total existing KMPUD storage capacity of 950,000 gallons is stored in a 250,000 gallon and a 700,000 gallon steel tank.

⁸ 2017 Dollars

Thus, an existing total storage need is 1,111,250 gallons means there is currently a 161,250 gallon deficit.⁹

“The District will need to construct a minimum of 600,000 gallons additional storage to meet operational, emergency, and fire storage requirements...”¹⁰ Of this additional 600,000 capacity, the existing KVFD portion is 161,250 or 26.9%. Anticipating a 600,000 gallon tank will cost approximately \$2/gallon, KVFD’s proportional share is \$322,800.

Additionally, minimal potable water service and fire protection is provided within the Kirkwood Valley, north of Highway 88. The construction of a distribution system, sufficient to provide adequate fire flow of 3,500 gpm would necessitate approximately 3,700 linear feet of 8” C900 PVC pipe, a pressure reducing station to facilitate an intertie between two existing pressure zones, hydrants and associated appurtenances. The portion of the line capacity needed to provide the necessary fire flow is approximately 40% and is apportioned accordingly below.

Anticipated Needs	Cost ⁸	Cycle	Estimated Implementation	Source of Funding
Water Storage Tank	\$322,800	At Build-Out ¹¹	2030	\$86,833 Annual Assessment Fundraising Grants \$235,967 Fire Impact Fees
Distribution System (North of Highway 88)	\$524,500	Request for Service by Owner/Developer	2025	\$314,700 Connection Fees \$209,800 Fire Impact Fees

⁹ KMPUD Services Capacity Analysis, Section 9.6

¹⁰ KMPUD Services Capacity Analysis, Section 9.7.2

¹¹ Constructing a tank to only address only the current deficit is not feasible due to limited land availability for multiple tanks and due to a loss of economy of scale for constructing multiple tanks instead of one larger tank.

Staffing/Volunteers

Additional Labor Needs	Cost⁸	Cycle	Estimated Implementation	Source of Funding
Volunteer Firefighters (2017)	\$38,000 annually	3-4 Volunteers	Current	Annual Assessment Fundraising
Volunteer Firefighters (Future)	\$76,000 annually	6-8 Volunteers	2027	Annual Assessment Fundraising
Part-Time, Seasonal Firefighter	\$18,000 ¹² annually	Dec - Apr	2018	Annual Assessment Fundraising Grants
Full-Time Firefighter	\$59,725 ¹³ annually	900 Connections or 300 additional EDU's	2027	Annual Assessment Fundraising Grants Fire Impact Fees
Recruitment Packet	\$2,500 annually	Annual	2018	Fundraising Grants
Training / Certification Program	\$2,500 annually	Annual	2019	Annual Assessment Fundraising Grants

Section IV Potential Future Funding Sources

Financing Options

Revenue to support the Fire Department is provided primarily through assessment of District property owners, contributions by those owners and residents, and fundraising events sponsored by the District. The Fire Department operates at a significant annual loss, requiring the District to supplement its funding with a portion of the Property Tax monies annually returned (20% of property taxes collected) to the District by the three counties. KMPUD's 2018 budget calls for a significant increase in revenues for the Fire Department in 2019.

¹² Calculated at 18.00 per hour with benefits.

¹³ Based on average starting salary of comparable Fire Protection Districts in terms of service area, populations, employees, and training requirements.

Several options are available for raising revenues:

1. Increasing the Annual Fire Assessment
2. Community Facilities District / Mello-Roos / Special Assessment District
3. Development Impact Fee
4. Excise Tax
5. Local Sales Tax
6. Civic Fees
7. Grants
8. Fundraising Activities

Evaluation of these options will consider if the option, alone or in combination with others;

1. Achieves the projected revenue increase in 2019.
2. Provides sources of revenue that more fairly distribute the burden between Kirkwood property owners and beneficiaries of KVFD services.
3. Provides long term sources of revenue.
4. Focuses on capacity projects, replacement projects, reducing the Department's operating deficit, or a combination of these.
5. Feasibility of implementation.

1. Annual Fire Assessment

The Fire Suppression Assessment was adopted by the Board in July 1997 (Resolution 97-03) for the benefit of fire protection services and obtaining, furnishing, operating and maintaining fire department equipment, and salaries and benefits of fire department personnel. The Assessment fee is \$.04 per square foot on an annual basis (billed monthly) and has not changed since July 1997. Increasing the assessment fee is an option that would focus on reducing the Department's operating deficit, but would continue to place the entire revenue burden on property owners. It would be long-term, and would achieve the revenue increase forecast.

2. Community Facilities District / Mello-Roos / Special Assessment District

Create a community facilities district (CFD) special tax to provide revenue to pay the costs of fire protection, ambulance and medical services. This option would focus on reducing the Department's operating deficit and more equally distributing the financial burden relative to benefit. This option might result in others, such as the day-use population paying a portion of the needed revenue increase. It would be long term, and in conjunction with the existing Fire Assessment Fee, would likely result in the forecasted revenue increase.

Funding under this option, for beneficiaries outside the KVFD Service Area, may require approval from the Local Area Formation Committee and or other State and Local regulatory agencies.

3. Development Impact Fee

The existing charge per square foot of new construction for fire impacts amounts to \$0.47 cents in Alpine County and \$0.81 cents in Amador County. This is revenue permitted by state law that allows a public agency to impose a fee on new construction that represents the cost to the agency to provide capital facilities and equipment to serve that new construction. This option would focus on capacity projects. This option would be long term, and would only be realized as development occurs, so capacity projects would need to be deferred until revenues reach a sufficient level, or possibly financed to increase capacity ahead of development. Understanding the feasibility of this option will require discussions with the Counties.

4. Excise Tax

The District may be able to adopt an excise tax, which is a tax on an activity or privilege performed or undertaken within the District. An example is an admissions tax. An admissions tax is a charge on admission to any entertainment, amusement or recreational event or activity for which an admission charge is made (e.g., ski lift). Several cities in California have adopted such a tax. This option would distribute the financial burden to those who have historically benefited from the services, but have not contributed to the same, such as day skiers. It would focus primarily on reducing the Department's operating deficit, but could, with growth in recreational visitors, also contribute to capital projects. The goal would be that this tax be in place for the long term. Feasibility of this option would depend on discussions with the Community, particularly the Resort, which generates most of the annual traffic in Kirkwood.

5. Local Sales Tax

The District cannot adopt a local sales tax without special legislative authorization. Some special districts have received such authorization, but typically for transportation and road related improvements and services. (e.g., Govt. Code § 67970, North Lake Tahoe Transportation Authority authorized to impose a special retail transactions and use tax.)

6. Civic Fees

Civic fees are currently collected by the Kirkwood Community Association (KCA) on retail and lodging sales in the Kirkwood Valley. Civic Fees could be increased or re-allocated to help fund Fire Department needs. Civic Fees are currently charged on the following:

- Food and beverage sales
- Merchandise sales (Lift ticket sales are exempt from Civic fees)
- Lodging night stays (Vail and Pyramid Peak property rentals of KCA properties)
- KCA member rentals (members renting their properties directly via VRBO etc.)
- Ski school

The fee is set as a percentage of the revenue collected. At present, the fee is set at 3.25%. The fee is determined by the KCA Board, over whom KVFD and the District have no authority. Retail sales and Lodging sales can have the civic fee set at different rates. At present, they are in synch, both 3.25%

Civic Fee revenue typically is in the \$200-240k range each year. Obviously, civic revenues fluctuate with skier visits and night stays at the resort. The Civic fee is added to the charge in addition to the local and state tax. Alpine sales tax of 7.5% plus the Civic fee of 3.25% adds to a 10.75% addition to the cost of goods.

Civic fees are currently used by the Kirkwood Community Association to fund the following activities:

- Road repair and maintenance of Kirkwood Meadows Drive
- Snowmelt expenses on the Village Plaza
- Maintenance on certain areas on the Village Plaza
- Snow removal costs for Kirkwood Meadows Drive
- Beautification efforts in the valley (Statues, flower seeding, tennis court maintenance etc.)

7. Grants

The District may be eligible for Federal, State and Local Grants from different sources. Grants may be available to fund Fire Department labor, specific operational projects, or capital projects. Any specific grant would not be long-term, but would fill a particular, immediate need.

8. Fundraising Activities

Currently the KVFD is a non-enterprise department of the Kirkwood Meadows Public Utility District with a 501(c)(3) nonprofit tax status. There are four fundraising activities the KVFD sponsors or participates in: The Kirkwood Summer Festival, the Carson Pass Rest stop for the Tour of California Alps, "Death Ride", Annual Kirkwood Labor Day 5k/10 Run and the Thin Air Chili Cook-Off. These events have been held for a number of years and raise between \$25,000 and \$40,000 annually. The feasibility of continuing the events in future years is largely dependent on Community members volunteering to plan and stage the events. Funds raised are used for both operational and capital (usually equipment) needs.

Section V Goals and Recommendations

Goals

Short Term (FY17/18 & 18/19):

1. Establish the method(s) by which the revenue projected in the 2017-2022 budget will be achieved.
2. Increase dedicated Fire Chief hours as workload proportionately increases to accommodate existing and future operation and administrative needs.
3. Continue funding one additional District staff member for the position of Fire Department Operator for peak emergency call volume times (December through March). The cost for this position is estimated at \$18,000 per year.
4. Secure grant(s) to fund fuel reduction programs such as the District's chipper program for a period of at least 1-2 years.
5. Improve volunteer resources to realize net income for the annual summer festival, chili cook-off 5K/10K runs, and death ride fundraising activities.
6. Increase recruitment of volunteer firefighters.
7. Establish an Alpine County Sheriff's Office satellite site, staffed by a Sheriff/Firefighter.

Long Term:

1. Provide stable, long term sources of funding to meet the additional operating and capital needs of the Fire Department through build-out, as defined in this plan.
2. Develop sources of funding to include contributions by all who benefit from the Department's services.

Recommendations

Facilities / Employee Housing

The existing Community Service Building (CSB) is adequate for the current operations of the fire department. However, as identified in the KMPUD Services Capacity Analysis, the District anticipates its Employee Housing need will double near build-out, from 12 Units to 24 Units, which includes an allocation for the KVFD Staff/Volunteers discussed in Section III.

Water Storage

As indicated in the KMPUD All Services Capacity Analysis (May 2014), the current water storage is currently deficient by 161,250 gallons and by 600,000 gallons at build-out to supply operational, emergency and fire flow requirements during peak times. Additional water storage or water sources will be needed to serve the community needs and fire flow requirements.

Further, a water distribution system will need to be established for the future development for the area north of Highway 88 near the Service Center., Kirkwood Inn and Kirkwood Resorts' Cross County Center commercial area.

Equipment

Adopt and implement an apparatus replacement schedule for the fire department's primary line firefighting apparatus (E-93). Purchase a new Type 1 Engine and decommission the fire department's reserve apparatus (E-191).¹⁴

In the future at buildout, the fire department will need to have at least two Type 1 Engines and one additional Light Rescue / Command vehicle to respond to emergency calls.

Staffing/Volunteers

The KVFD is operating at the minimum staffing requirements and needs to increase the volunteer roster of members to continue to provide the essential fire protection and EMS service for the community. On average one Firefighter / EMT and one KVFD volunteer respond to emergency calls, and on some occasions and during major emergency calls (structure fires, multiple vehicle accidents, etc.) more are needed to perform the various tasks required during a call.

Reviewing other similar sized fire departments in the area, the ideal number of firefighters responding per vehicle would be four: one Officer, one Engineer and two Firefighters. The number of firefighters will need to progressively increase as the community grows to reach at least four firefighters, two Engineers, two Captains and one Chief Officer at build out.

According to National Fire Protection Association (NFPA 1720) standards for the organization and deployment of fire suppression operations, emergency medical services and special operations to the public by volunteer fire departments. Section 4.1.5 says, "The fire department shall identify minimum staffing requirements to ensure that enough members are available to operate safely and effectively".

It is recommended that KVFD continue to employ an hourly part-time paid Firefighter / EMT to assist with fire department operations, and to respond to emergency calls in the winter during the peak call volume periods for the next five years. Further, as growth occurs, the addition of a full-time firefighter may be necessary.

Agreements

Update and renew and Auto Aid and Mutual Aid Agreements with Eastern Alpine County Fire Department and Amador Fire Protection District.

Funding

Establish the funding method that is the most feasible to implement, meets the stated goals noted above and will be a sustainable source of operating revenues.

¹⁴ The National Fire Protection Agency (NFPA) 1911 Annex "D" recommends apparatus over 25 years old should be replaced.