

SOUTH LAKE TAHOE



FIRE RESCUE

Business Plan 2017

"We will reflect the National Treasure in which we live"

Fire Departments depend on equipment and personnel to accomplish their tasks. Those tasks vary from each agency but the City of South Lake Tahoe Fire Department has determined that at a minimum the agency should respond to the following types of incidents within the City limits. They include response to any type of fire, which would include structure fires, wildland fires, vehicle fires, natural gas and flammable liquid fires. The agency also responds as a first responder advanced life support to all medical emergencies within the City. A vast majority of miscellaneous calls are dispatched from our joint Police/Fire/Medical dispatch agency which general include all emergencies, perceived or legitimate that are not police emergencies. (help back into bed, smell of smoke, general public assistance).

The basic tool within the fire department is a Type 1 engine or structural engine. In the City that unit is staffed with three personnel (Captain, Engineer and Firefighter/Paramedic). The City has two daily staffed engines responding out of Fire Station 1 located on Ski Run Boulevard and Fire Station 3 on Lake Tahoe Boulevard, near the "Y". In addition to those two engines we have a one person squad staffed with an engineer and a one person Battalion Chief vehicle.

Engine crews also cross staff a Type 3 wildland engine during the summer months. That engine is smaller and was designed to fight grass and brush fires within City limits. If a Type 1 engine crew staffs the Type 3 engine, the Type 1 engine remains unstaffed during that response.

The squad serves as a smaller version of the ladder truck carrying specific tools which include auto extrication equipment, specialized rescue gear including ice and water rescue, ropes, salvage equipment and a compliment of saws and tools. The ladder truck is currently not staffed and would require 3 personnel to operate it safely. The ladder truck is currently stored at Fire Station 4 at the airport and would be used for major incidents where off duty personnel would be called back into the City to staff that unit.

This business plan looks at the capital expenditure items that cost significant amounts of money. The cost models for the replacement of fire apparatus, self-contained breathing apparatus and personal protective clothing are highly regulated and very specialized. The City has made it a current practice to devote Proposition 172 funds (a special ½ cent sales tax state wide to support law and fire) to replace capital equipment for the fire department. We receive approximately 50% of those allocated funds with the Police Department receiving the other 50%.

Fire Agencies have time tested standards for the specification, purchase and acceptance of equipment as outlined in the National Fire Protection Standards. These NFPA standards were designed and development to ensure that fire agencies standardized the purchase and replacement of equipment and those municipalities were protected from litigation.

Current fire department management has outlined a plan to replace the apparatus, equipment and protective clothing of its member's in a pragmatic manner, aware of the budget burdens of a variety of departments within the City. The department has been aggressive in applying and receiving both federal and local grants to replace worn and outdated supplies. Grants of this nature are competitive and often require a City match. The department has also looked at determining the needed "bandwidth" to provide services to our community in the most cost effective manner. Department management will update this business plan on an annual basis and will use this document as a guide to both grant management and request annual budgets.

City of South Lake Tahoe Fire Department Business Plan

July 2017

ITEM	AGE	LIFESPAN	SUGGESTED REPLACE YEAR
------	-----	----------	------------------------

APPARATUS

Engine 1 #6214	3	12	2026
Engine 2 OOS surplus			
Engine 3 #6299	18	12	2011 Engine on order
Engine 203 #6103	14	12	2015
Truck 2 #6114	3	17	2031
Brush 1 #6109	7	15	2024
Brush 3 #6209	7	15	2024
Squad 3 #6108	8	15	2023
Battalion 3 #6111*	6	10	2021 *No take home vehicles
Boat OOS went to surplus 2015		In need of replacement now	Immediate
Utility 301 #6207	9	10	2017
Chief 300 #6107	9	10	2017

PERSONAL PROTECTIVE EQUIPMENT

Turnouts	10 (at the oldest)	10	2016 * on order – all new as of 2017
Wildland Gear	New as of 2015	10	2024

SCBA

SCBA 9/15	2	10	2025
Mobile Air Compressor	8	15	2024
Air Compressor	12	20	2025

TOOLS AND EQUIPMENT

<u>ITEM</u>	<u>AGE</u>	<u>LIFESPAN</u>	<u>REPLACE YEAR</u>
Hose	31(varies)	*** begin replacement due to testing	25% yearly
Scene Lights	Varied		Replace when purchase new
Thermal Imaging Camera	9	10	2015
Mustang Ice Suits	5	*** based on yearly inspection	
Chainsaws	Varied	10	replace with apparatus
Positive Pressure Ventilation	Varied	15	replace with apparatus
Wet Vacuums	Varied	10	replace with apparatus
Ladders (24", roof, attic)	Varied	10	replace with apparatus
4 Gas Monitors	2	2	2014
Radios	Varied		replace with apparatus
Extrication Tools	8	10*	2026

*based on response model, new tools on Truck

FACILITIES

Relocate Station 2	69	50	?
Remodel Station 3	59	50	?
Stain Station 1	22	50	2015

EMS CAPITAL EQUIPMENT

EKG Monitors (for engines)	12	8	Replaced in 2015
----------------------------	----	---	------------------

Explanation

Apparatus: Create a vehicle replacement fund and schedule replacement for all apparatus including staff and utility vehicles. Type 1 engines and ladder trucks have a typical life span of 12 years. Brush engines and squads, due to lower usage, have a lifespan of 15 years. All other vehicles have a typical life span of 10 years. We should place Type 1 engines into a reserve status for 5 years after being taken out of front line service to serve as a backup engine for extra staffing needs and when apparatus is in the shop. The harsh winter conditions, the need for four wheel drive and the poor roadway system takes an incredible toll on fire apparatus chassis and running gears. These apparatus are started and run at Code 3 driving conditions. In winter condition the accumulation of road grime, the use of snow chains has taken a toll on body components.

Personal Protective Equipment: Create a replacement plan for PPE. NFPA standard 1851 calls for PPE to be placed out of service and replaced 10 years after the manufacturer date. 15 new sets were purchased in 2013. Each Firefighter should have two full sets of turnouts-one in service and a back-up set should the in service set sustain damage or need cleaning. Most of our turnouts will be out of service at the end of 2017. Nearly 2/3 of our stock have been purchased for replacement this year with the rest to be purchased in the 2016/17 budget cycle.

SCBA: Create a replacement plan for our Self-Contained Breathing Apparatus. Per NFPA standard 1981, composite SCBA bottles have a life span of 15 years. Significant code changes have dictated that SCBA should be updated with changes in technology, new OSHA laws dictate the these changes based on failures and new breathing air standards regarding low pressure alarm changes. SCBA allows firefighters to enter toxic environments and need constant maintenance and repairs. SLTFR replaced all SCBA with Scott breathing apparatus in 2015.

Facilities: Fire Stations have a typical life span of 50 years due to their heavy use. Fire stations 2 and 3 were built and acquired from Lake Valley FPD when the City developed its fire department. That actually occurred in 1966 one year after the City was formed. Those stations were built for the size of fire apparatus in the late 50's and 60's. Although several remodels have occurred at these fire stations their basic design was for smaller fire apparatus and less safety features. The City is involved in a partnership with Lake Tahoe Community College for its fire science program; currently we store academy supplies at Station 4 (airport). With the advent of LTCC passing a bond measure to build a public safety training center it has been suggested that we relocate Fire Station 2 to that site. That

concept is very sound but an outside funding source must be created to accomplish that task. The City also needs to create a plan to remodel and update Fire Station 3. Fire Station 1 is the only fire station that the City has built. It is critical that we create a maintenance plan to ensure that building meets its 50 year life plan. This should be our number one priority for facilities. In 2016 the exterior of Station 1 will be stained. Several other issues have been identified and repaired/replaced at Station 1.

EMS equipment: The delivery of emergency medical services, particularly advanced life support systems is a function of our JPA for transportation and of the City with our engines and squad. EMS is changing on a routine basis allowing field paramedics to perform increased life safety measures which in turn requires updated training and equipment. The City established paramedic engine companies in 2014 which requires expensive cardiac monitoring tools, advanced life support drugs and space for this service. When the JPA updates equipment, the City should follow that on their ALS engines.

Tools and equipment: Fire apparatus in essence is a giant tool box that delivers the needed tools to the scene of an emergency. This includes ladders, hose, saws and specialized rescue equipment to meet that challenge. The organization has not monitored the testing and replacement of that equipment on a regular basis. We have not had the funds to purchase new apparatus with new equipment so often times fire hose, ladders and the specialized tools are far older than the apparatus itself. In 2014 due to replacement of a new engine and a major reorganization the City we will now have a reserve engine that will not be fully equipped and require crews to swap equipment when a fire engine is broken or in for maintenance. This is problematic when off duty crews are required to staff that engine for a major emergency.

ITEM	COST PER UNIT	TOTAL COST(#UNITS)
Type I Engine	\$700,000+	N/A
Type III Engine	\$300,000	N/A
Truck	\$1,045,000	N/A
Utility vehicle	\$50,000	\$150,000
Squad	\$400,000	\$400,000
Boat	\$200,000	N/A
Turnouts	\$2,575	\$92,700 (36)
Wildland Gear	\$395	\$14,220 (36)
SCBA	\$10,200	\$327,000 (32)
Mobile Air Compressor	\$55,000	N/A
Air Compressor	\$91,000	N/A
Hose	\$1000- 750	\$14,000
Scene Lights	\$750	\$9,000 (12)
TIC	\$15,000	\$45,000 (3)
Mustang Ice Suits	\$900	\$2,700 (3)
Chainsaws	\$800	\$5,600 (7)
PPV	\$2,000	\$10,000 (5)
Wet Vacuums	\$1,600	\$8,000 (5)
Ladders (24", roof, attic)	\$1,250	\$5,000 (4)
4 Gas Monitors	\$750	\$3,000 (4)
Radios	\$2,000	\$48,000 (24)
Extrication Tools	\$15,000	\$45,000 (3)
EKG Monitors	\$35,000	\$105,000 (3)