

Orange Grove Volunteer Fire Company Five Year Plan

Fire and Life Safety protection in the Cane Creek Fire District identified as our service area is the responsibility of the Orange Grove Volunteer Fire Department. Therefore, it is necessary to establish a plan by which the department may chart its future. As the community continues to expand, change, and diversify, the Fire Department must anticipate this growth and changes that come to continue to deliver the highest level of service to the citizens and visitors. The Fire Department will work closely with the Board of Directors, Orange County Commissioners, and other emergency service providers which include surrounding fire departments Orange County Emergency Management, and the American Red Cross. The department will also interact with citizens and businesses to meet their expectations. As our population continues to grow, we expect to see increased highway traffic, a higher density of aging people, and the amount of people who want to live in the natural woodlands and forest, are a major concern of the fire department. As the population increases, build-up of new structures occurs and the effects on the people and environment become more critical. In the future, the fire service expects to take on other functions to assist in managing some of these problems.

Objective and Development

It is the objective of this five (5) year plan to prioritize the service needs of the community and the fire department. The plan will identify the most cost-effective method of providing fire protection and life safety preparedness to the citizens of the OGVFD fire district. This document entails an evaluation of the current organization, staffing levels, use of advanced technology, and the status of the present equipment. It identifies changes to advance the current services and reveals how to prepare the public's awareness and readiness for emergencies that may have an adverse impact on the community.

History of Orange Grove Volunteer Fire Company/Department

In those old days, there were only two fire departments in Orange County serving places outside of the towns: Orange Rural and Eno. Properties located in the rural area south of Hillsborough and west of Carrboro had no fire protection; except what could be offered by the personnel of Eli Whitney Fire Department located on old Greensboro Highway, several miles west of Haw River in Alamance County. So, if you lived in or around Orange Grove and had a fire, you pretty much had to deal with it yourself. If you couldn't, you summons help from your neighbors. As a last resort, you might try the Orange Rural Fire Department out of Hillsborough.

In 1972, a fire occurred at Maple View Farm in a barn behind Bob Nutter's house. Eli Whitney Fire Department responded, since no formal department existed to provide fire protection to the community. It would take more than twenty minutes for the fire trucks to arrive.

That was not the only fire that year. There was one on Buckhorn Road and another on Orange Grove Road toward Hillsborough. Gary Durham's farm had a fire, and Clyde Pickard lost a barn but managed to save his milking parlor. Berry Andrews also lost his main barn and Charles Best

had a fire at his dairy farm, which destroyed a barn. The early seventies were bad years for fires around the community.

One day, after the rash of fires described above, Charles Snipes talked about the problem with Chandler Cates who owned a fuel oil distribution business in Hillsborough. Cates was a member of the Orange Rural Fire Department. He told Charles that Orange Grove ought to think seriously about forming a fire company. But he warned that most fire companies would wind up spending most of the time raising money to buy equipment and run the operation. There would be a constant stream of fund-raising activities such as ham and egg suppers, tractor pulls, and horse shows. Firefighting is not cheap. Trucks must be bought, a station built, fire-fighting gear bought, and there was a lot of training involved. It was not a job to be undertaken lightly. It required a serious commitment.

But, as fortune would have it, the North Carolina legislature was considering a new law that would allow fire tax districts to be formed. If the residents within the district approved it, a fire tax could be levied by the county and the proceeds would go to support the fire company. This would relieve the members of the fund-raising chore so that they could devote full attention to training and firefighting.

Orange Grove Volunteer Fire Company/Department (Today)

Since formation, OGVFD has provided quality service to our community. That is over fifty years, for which we plan a celebration in the spring of 2023.

Today, the department's complement of emergency service equipment includes four pumper/tankers, three 2,000-gallon tankers, one brush truck, and two pickup truck/quick response vehicles. The fire department membership is three career staff positions and twenty-nine volunteers. Historically the number of emergency response calls has continually increased until the 2020 pandemic which caused a decrease in calls. There were 306 requests for emergency assistance in 2020; 377 in 2021; 467 in 2022. The call volume trend appears to be increasing annually. As the population and the community continue to grow, the requests for service will increase as well.

The OGVFD Fire/Rescue Department serves the citizens of OGVFD fire district under a contract with Orange County. Under mutual/automatic aid agreements, we assist all other Fire/Rescue departments located within the county. We also have mutual/automatic aid agreements that expand our assistance into adjoining counties. Currently, the fire department maintains a class five (5) insurance rating inside the five-mile Cane Creek fire district and a class nine (9S) rating in areas beyond the five-mile and up to the six-mile travel distances.

The total area of protection served by the fire department is approximately 60 square miles with an approximate population of 8,400.

The department provides a variety of services including response to structure and automobile fires, automatic fire alarms, automobile accidents, basic emergency medical services, natural

disasters, environmental hazards, and public fire prevention education. The Department makes a great effort to eliminate, identify, and prepare for the hazards that threaten lives, property, and environment throughout the community.

Growth and Development of the Community

The community has experienced an increase in residential growth in the past decades. The Orange Grove community is still primarily an undeveloped farming and forested land. The Cane Creek reservoir for the southern end of Orange County is in the heart of the district and is surrounded by a forested buffer. Several large old wood frame farm building complexes and homes remain in the community. We have few multiple-family residential structures; however, we are predominately single-family homes, and some are in subdivisions. We have a few commercial buildings, service stations, and convenience stores and event centers located in the district. The community is starting to see more retirees living here and others who commute to work in the surrounding area. Many others work from home. The many attractive attributes associated with living in this community will continue, and growth will place increasing demands on our services. We clearly recognize our responsibility to plan carefully.

Potential Fire Problems

The potential fire problems in the district can be divided into three groups Residential, Commercial, and Special Hazards.

Residential:

The residential fire problem includes duplexes, houses that have been divided into apartment style living, older single-family homes, and large square footage homes. Multiple family complexes present several problems to the fire department some of which include poor accessibility to the buildings and multiple unrelated occupants in a single structure. There are older homes in the community dating back over fifty years, with some as old as 100 years. With aging of the structures, we start to see fire problems related to structural deterioration and aging electrical systems in the homes.

Subdivision development housing is also a potential problem. Many of our subdivisions are developed purposefully in wooded areas. Forest litter is combustible and, in many cases, remains right up to the sides of houses. Moreover, access to many structures in our district is limited by narrow driveways, overhanging limbs, and poorly maintained road surfaces.

Commercial/Service:

The department protects some light commercial/service facilities and farming operations that have multiple structures located on the same property. Some of these facilities have accessibility issues.

Special hazards:

Special hazards include chemical emergencies, natural disaster and transportation accidents (highway). The most likely of these would be a natural disaster. In fact, tornados and hurricanes have caused problems for our citizens and responders in the recent past.

Fire Department Organization

The fire department is the community's emergency service provider and answers to the OGVFD Board of Directors. Orange Grove Volunteer Fire Department is chartered by the State of North Carolina as a fire department and operates under contract with Orange County to provide the fire/rescue services for the Orange Grove Fire Department district. The Fire Chief manages the overall operations of fire department. The responsibilities of the Fire Chief include planning, budgeting, personnel management, and directing the activities of the department, which in turn reflect the organizational goals. The organizational goals provide general guidelines for the activities conducted by the department. The department must periodically evaluate its performance to determine if goals are being met. Some of the goals are as follows:

- Provide the necessary level of fire, rescue, medical services and related training to all personnel to meet the safety needs of the community.
- Provide fire suppression, rescue and medical services to the fire district, and to fulfill mutual aid obligations.
- Provide personnel with educational opportunities that will allow them to prepare themselves for higher levels of responsibility.
- Provide proper safety gear and equipment (that provide proper protection under all working conditions) to all fire department members.
- Maintain all equipment and apparatus in proper working conditions.
- Provide an adequate radio system capable of maintaining contact with central communications and on-scene personnel during incidents.
- Maintain a high level of internal communication.
- Maintain the lowest ISO rating given the available resources.
- Review the established departmental objectives periodically to assure goals and objectives are accomplished.
- Reduce fire & life loss through fire prevention, public educational programs.
- Maintain preparedness planning for natural and man-made disasters.

Fire Department Service Rating:

The OGVFD Fire Department is rated by the Insurance Service Office at protection Class 5 for properties less than five miles and Class 9 for properties in the five to six-mile travel distance from one of the stations. The rating is based on the department's equipment, training, communications, and water system. Fire Department service ratings are used in determining the premiums that insurance companies charge structural property owners in a fire department's protection area. It is desirable to maintain this rating so that residential and commercial building owners can experience lower fire insurance premiums. The Orange Grove department's rating falls in mid-range throughout the state of NC. A further reduction in the rating may be possible by increasing the number of water point locations, additional apparatus, adding paid personnel, and constructing additional stations and/or training facilities.

Department Personnel

The department is composed of two groups of personnel, volunteer and paid. Presently, there are around thirty members in the department. These are mostly volunteers plus a few paid full-time personnel and part-time paid employees. Volunteer personnel provide an especially critical additional source of manpower for fire suppression activities mostly during the evening and overnight hours. The department is equipped to maintain a total of forty members operating out of the three fire stations. Volunteers and off-duty personnel receive notification of emergency calls via pagers. Typically, we average fifteen or more members on structure fires and five to eight members on medical calls.

The department has struggled to recruit and retain volunteer members, which is a recognized issue across the entire United States. Volunteer personnel must complete a probationary period and interdepartmental training classes before being allowed to participate at emergency scenes. Personnel must attend 25% of the regular departmental training/meetings and 10% of the dispatched calls for service to maintain their status on the department. Volunteer members serve throughout ranks in the department as officers, apparatus operators, and firefighters.

Staff and leadership personnel comprise both paid and volunteer members. These people provide the technical and support services to maintain departmental facilities, equipment, training and administration.

Presently, all members of the career staff hold NC Level II firefighter certification. Administrative duties are divided among the Chief Officers and Fire Captains. We continuously look for ways to streamline all operations and administration functions.

Personnel Recommendations:

FY 2023 - 2028:

- Add one employee to the fire department staff. We continue to see a decrease in volunteer recruitment while the daily workload increases. An additional person will help augment the volunteer turnout when other staff personnel are off on vacation and to maintain a workable and safe number of personnel on emergency incidents.
- Continue to fund the part-time personnel budget line account to maintain a staff level of three personnel. This will allow the staff to focus on administrative duties while the part-time personnel can assist in daily activities required to maintain the equipment, buildings, and grounds.

Standards/Qualifications/Training

North Carolina Community Colleges provides certification programs for firefighters, fire officers, driver/operators, hazardous material responders, inspectors, arson investigators, and

public fire educators. These programs are currently voluntary however may become mandatory at some point in the future. The recommendations of North Carolina & Federal OSHA and NFPA 1500, the Fire Department Occupational Safety and Health Programs influences the types of equipment purchased, personnel training, and departmental procedures. OSHA requirements and NFPA 1500 recommendations include the use of medical monitoring of all personnel.

Facilities to conduct proper training are critical. Currently, the department conducts training at the fire station facility as well as at other locations within the district and participates with county- wide training quarterly. We will begin using the county training grounds located in Chapel Hill for some of the departmental training.

Training Recommendations:

FY 2023 - 2028:

- Update training material to continue training to the NC and NFPA firefighter standards with the goal of having all firefighters NC certified to level 1 or 2.
- Plan and calendar our in-service training and making sure all records are kept up to date.
- Look for online training software that will allow personnel to complete training through self-study.

Communications & Technological

Fire pagers, via the Communications Center, notify members of the department to respond to request for assistance and emergencies. The fire department will be providing radios and pagers for all members to meet the communication needs. All vital records of the fire department have been transferred to a computer data base system. The next step in the management of the records is to be able to access the records and database in the field.

Communications & Technological Recommendations:

FY 2023 - 2028:

- Continue to replace pagers and portable radios on an ongoing basis to keep the department up-to-date with the changing technological improvements. Approximate cost \$ 5,000 annually.

Fire Safety Education/Prevention

The Orange County Fire Marshal is responsible for code enforcement throughout the unincorporated portion including our district. Fire safety education/prevention activities for our community are our responsibility. As the community continues to experience its growth, additional fire education programs will be implemented.

The Fire Safety Education/Prevention recommendations are:

FY 2023-2028

- Continue to send the postcard information mailers to the community on an annual basis in the month of November. Cost - \$ 1,500
- Provide an electronic sign/message board at station # 1 for fire prevention messages and other information. Cost \$ 25,000

Mobile Fire Apparatus

The department has been replacing the fire apparatus on a regular basis to address the aging of previous apparatus. As the apparatus comes up for replacement, the act of purchasing fire units that will perform multiple functions will make our provision of service more flexible and efficient. We are also anticipating the need for a smaller Quick Response Vehicle to handle the equipment and personnel to respond to the medical incidents.

We currently use a pickup truck to respond to medical calls due to accessibility issues throughout the district. With the multifunctional concept, personnel could respond to medical calls with a unit that could have fire suppression capabilities on the vehicle. The vehicle could also serve as brush fire response vehicle. In this manner, personnel would be available to respond from a medical call directly to a fire or rescue incident with the multifunctional unit.

The department currently provides a high level of protection to the citizens of Orange Grove fire district with the current apparatus we have, listed below:

Primary Fire Suppression Vehicles:

Engine 531:	2021 4 Guys/Spartan Pumper/Tanker, 1500 gallon per minute pump with 1000 gallons of water on board.
Engine 532:	2004 Ferrara/Spartan Pumper/Tanker, 1250 gallon per minute pump with 1000 gallons of water on board.
Engine 533:	2000 Pierce Pumper/Tanker, 1250 gallon per minute pump with 1000 gallons of water on board.
Engine 561:	2019 Freightliner/Spartan Pumper/Tanker, 1250 gallon per minute pump with 1000 gallons of water on board.
Tanker 541:	2016 Kenworth Pumper/Tanker, 1000 gallon per minute pump with 2000 gallons of water on board.

- Tanker 542: 2010 Peterbilt Pumper/Tanker, 1000 gallon per minute pump with 2000 gallons of water on board.
- Tanker 543: 1995 International Tanker, 250 gallon per minute pump with 2000 gallons of water on board.
- Brush 551: 2003 Ford Brush Truck with 100 gallon per minute pump with 100 gallons of water on board.

Secondary Vehicles:

- Pickup 581: 2019 Ford F150 Pick-up truck used as administrative and support the department daily operations.
- Pickup 582: 2014 Ford F150 Pick-up truck used as Quick Response Vehicle for medical calls and support the department daily operations.
- Trash 1: 1992 Mazda Pick-up truck used as utility vehicle and for short hauls between stations.

Fire suppression apparatus typically have a service life of twenty-five to thirty years, which may vary based on usage, maintenance, and other variables. Fire department apparatus should be replaced as apparatus condition warrants and depending upon the needs of the community. The department maintains three secondary vehicles that should be set up on a ten year replacement schedule.

Mobile Apparatus Replacement Recommendations:

FY 2023-2024

- Trash 1: 1992 Mazda Pick-up truck used as the trash hauling vehicle and short hauls between stations. Overall condition (Poor)

- **Recommendation would be to replace Trash 1 with an Administrative/Command vehicle. Transfer 581 to primary medical response and 582 would become secondary for medical calls and used for hauling equipment and pulling a trailer. The estimated cost to replace & equip these vehicles in this manner is \$100,000 dollars.**

FY 2025-2026

Brush 551: 2003 Ford Brush Truck with 100 gallons of water and 250 gallon per minute pump.

- **Recommendation would be to replace the brush truck (551) with one Mini Pumper/Brush Truck/Quick Response Unit. Evaluate the need to maintain or sell the current brush truck. The estimated net cost to replace this unit is \$370,000 dollars.**

FY 2027-2028

Engine 533: 2000 Pierce Pumper/Tanker, 1250 gallon per minute pump with 1000 gallons of water on board.

- **Recommendation would be to replace this unit with the similar type pumper/tanker and surplus this pumper/tanker. The estimated cost to replace this unit is \$500,000 - \$550,000 dollars.**

Firefighting & Rescue Equipment:

In addition to fire apparatus, the department has other specialized equipment. Equipment, such as hoses, self-contained breathing apparatus (SCBA), turnout gear, thermal imaging cameras, extrication tools and radios, wear out and need to be replaced on a regular basis. All members of the department are equipped with personal protective firefighting gear.

Equipment Replace Recommendations:

FY 2023-2028:

- Purchase a Rapid Intervention Bag that works directly with our recently purchased Airpacks. The cost for this is \$ 6,000.
- Nozzles need to be up-graded to make all attack lines the same across all apparatus. The cost for this is \$10,000.

Facilities

The fire department currently operates out of three fire stations. Station 1 was constructed in 1973, station 2 in 2012, and station 3 in 2013. Initial facilities improvements will primarily address the conditions and space needs at fire station 1.

The main station currently has three offices, one for the fire chief, two for career captains and an area for OCEMS. Personnel assigned to station one include paid staff, 25-30 volunteer personnel and two EMS employees. Other space in the station is used for support functions such as training room, kitchen, storage closets, restrooms, and apparatus bay. These areas all small considering the number of personnel assigned to this station. There are no overnight accommodations in any of our stations.

Description of Issues with Station 1

Station 1 was constructed in 1973 as a volunteer fire station that served a smaller community. At that time the department was all volunteers with no staff employee operations. The station has been in service for over fifty years. During that time, it has been expanded once to make more space and sleeping quarters. Since then, the bedrooms and firefighter lounge area have been converted to offices and space for an EMS base. There are no sleeping quarters.

The bays doors on station 1 open to 10 feet high. Our current apparatus will just clear to enter and depart the station, and new apparatus will probably not clear that height.

Description of Issues with Station 2

Station 2 was constructed in 2013 as a substation for the districts eastern service area. It is a metal building housing one pumper/tanker and one tanker. One major issue there is the trucks must back into the station from the roadway. The building has no climate control other than heat to keep the trucks from freezing in the winter. This part of the district is developing faster and is more populated than the western side of the district. Call volume indicates the need to look at the future needs at station 2 and possibly for a future station in the northern part of our district as well.

Description of Issues with Station 3

Station 3 was constructed in 2015 as a substation for the district's western service area. It is a metal building housing one pumper/tanker and one tanker. As with station 2, the trucks must back into the station from the roadway. The building has no climate control other than heat to keep the trucks from freezing in the winter.

Station Replacement Recommendations:

FY 2023-2028:

Start planning and executing into expansion of Station 2 and Station 1. Also, look for additional land to for use in the future for a possible northern station.

Long range facility

- Additional fire stations may be needed in the future in order to provide the proper coverage to reduce travel distances and bring the properties within the 5 mile limit. Potentially toward the western section of Highway 54 and the Orange Grove & Davis Rd area. These stations are needed to meet the response time required by the Department of Insurance in order to provide our current ISO rating of 5 to the properties. Additionally, citizens living in that area deserve the same quality of service be receiving the same level of response enjoyed by the citizens living within the five (5) mile response area of the current fire stations. Additional fire stations would meet the response needs of those citizens.

Summary

This plan will be intended for use as a guide in determining the future community's service needs as related to fire and rescue protection. This document only addresses key issues that are known to us today and, at best, what we have predicted for the short-term future. Knowing and identifying the hazards and complexity of properties within our community, preparing for major disasters and training personnel to respond to such a variety of different types of emergency incidents are all issues we have to plan for. Further growth in career staff will become necessary to maintain the level of service that we currently provide. It is the hope of the fire administration that this plan will provide the guidelines for the continued progression of the fire department. This plan may be modified over the five years to meet the changing needs of the community.

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Date: *2-16-2023*