

Orange County Fire Authority Reserve Program Review



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Orange County Fire Authority

Reserve Program Review

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Table of Contents

Executive Summary	1
<i>Summary of Findings</i>	<i>1</i>
Background	2
Purpose of Program	5
Program Modifications.....	6
Current Conditions & Findings.....	7
<i>Oversight</i>	<i>9</i>
<i>Recruitment</i>	<i>12</i>
<i>Leadership.....</i>	<i>13</i>
<i>Training.....</i>	<i>14</i>
<i>Utilization</i>	<i>15</i>
<i>Challenges.....</i>	<i>17</i>
<i>Strengths</i>	<i>19</i>
<i>Opportunities</i>	<i>19</i>
<i>Threats</i>	<i>20</i>
Future Considerations	20
Implementation Strategies	25
Recommendations	25
Appendix (Response Data by Unit)	27

Table of Figures

Figure 1: Reserve Emergency Response Performance.....	8
Figure 2: Position and Time Allocations, Reserve Program.....	10
Figure 3: Estimated Program Cost, by Category	11
Figure 4: Reserve Workload, 2002 - 2007	16
Figure 5: Reserve Company Utilization by Unit Type	17
Figure 6: Dispatched, Enroute, and On Scene Performance, 2002 - 2007	21
Figure 7: Enroute vs. On Scene Performance, 2002 - 2007	22
Figure 8: Day vs. Night Enroute Performance	22
Figure 9: Suggested Modifications Provided by Senior Reserve Officers	25
Figure 10: Reserve Program Recommendations.....	26

Executive Summary

There is no greater, longer-running expression of volunteerism in U.S. history than the volunteer fire service, which still saves taxpayers billions of dollars each year. Almost three-fourths of the nation's 1.1 million firefighters are volunteers, and two-thirds of all fire departments are volunteer organizations. From a practical and financial perspective, volunteers are the most viable option where incident activity and risk is low and where local economics do not support career responders.

A comprehensive review of the Orange County Fire Authority (OCFA) reserve program was conducted as an output of the organization's 2000 Strategic Planning process. A high priority was placed on the utilization and role of the reserves; the reserve program was one of six initiatives identified within the strategic plan. As a result of the review, the program was modified to maximize the utilization of reserves, while recognizing the need to ensure system wide responsiveness and reliability.

In preparation for OCFA's 2008 strategic planning process and in response to concerns expressed following the Santiago Fire (2007), Emergency Services Consulting inc. (ESCI) was asked to conduct a limited review of the reserve program. The methodology utilized by ESCI to conduct this review encompassed the following components:

- Background
- Purpose of Program
- Program Modifications
- Current Findings & Observations
- Future Considerations
- Implementation Strategies
- Recommendations

The observations included in this report were confirmed from multiple sources or the information provided was significant enough to be included.

Summary of Findings

The intent and purpose of the reserve program, as chartered, is currently being met. The reserve program is functioning in a supplemental response capacity to ensure that adequate

resources are available to effectively staff and equip emergency events occurring within the community, particularly during extended emergency operations.

The program adds value to the organization and the communities served. The reserves did a good job during the Santiago fire and the program will definitely serve the communities well in the event there is a significant demand and need for responding medical vehicles and personnel.

The financial investment made by the OCFA in return for services provided by the reserve program appears to be reasonable. It is difficult to measure the “cost effectiveness” of a program that is partially designed to provide support in the event of a major event and is community based.

The analysis of response reliability confirmed that the decision to utilize the reserve force as a supplemental response resource was a good one. The analysis of the five engine companies also confirmed a national trend that volunteer response is more difficult during day time hours, particularly Monday through Friday.

Challenges and difficulties within the reserve program are very similar to the issues being experienced throughout the country relative to recruiting, training, and retaining volunteer personnel.

Internal changes can be made within the reserve program that will provide added value and serve to strengthen the overall program.

Specific recommendations are included in the body and at the end of this report. It is important to note that ESCi heard the following statement over and over during the course of this engagement, “*The OCFA reserves are a very dedicated group of individuals.*”

Background

To ESCi’s knowledge, there are only three metro fire departments on the west coast that utilize volunteers as a part of the emergency services delivery system: OCFA, Los Angeles County Fire Department, and Tualatin Valley Fire and Rescue (Oregon). These organizations all utilize volunteer or reserve members in a similar capacity.

Risk, incident activity, and demographics are external factors that determine the success of a volunteer program. Volunteer programs are impacted by increased service demand, usually where there are urban population densities. Consequently, it is more difficult to utilize volunteers as the primary component of a delivery system. In addition, aging and diverse populations cannot participate or are not willing to participate in an emergency service delivery system.

Between the 1960s and today, Orange County has evolved from a rural community with an approximate population of 400,000 to a number of urban communities with a total population of over 3 million. Orange County's population is larger than that of 22 U.S. states. This growth has had a significant impact on community expectations and the types and levels of emergency services offered.

One initiative identified in OCFA's 2000 Strategic Plan was to review the reserve program. In early 2002, a report was submitted to the OCFA Board that made recommendations relative to the program's structure. The Board authorized the Fire Chief to proceed with the implementation of recommendations regarding the reserve program.

The reserve program restructuring occurred in 2002 and has resulted in better resource utilization. The restructuring recognized the program's importance and its limitations, acknowledging that it is not practical to depend on reserves for primary emergency response except in isolated areas. The restructuring further addressed modifications in the training, assignment, and utilization of reserves. The restructured program emphasizes the utilization of reserves where they will have the most significant impact on service delivery performance. These areas include utilization on emergency medical services (EMS) calls, wildland fires, and support of the career crews during extended operations.

Today, there are four primary vehicle types that the reserves are called to staff: 5 engines, 7 squads, 12 patrols, and 4 water tenders. In addition, there are seven specialty units which provide specific services or functions. These include two air utility units, one helicopter support unit, and several vehicles supporting Air Operations.

While stationed at certain facilities, the reserves are called upon an average of 18 times per day to respond to a wide variety of emergencies throughout the OCFA service area. They are dispatched throughout the jurisdiction. An overview of reserve unit reliability and utilization is summarized later in this report. The primary role of the reserve program is to supplement response resources. Operational guidelines and policies are in place to ensure the authorized program's purpose is being fulfilled.

In 2007, OCFA reserves were dispatched to 6,443 calls. Of those calls, the dispatched units responded 38.41 percent of the time (2,475 responses) and arrived on scene 27.20 percent of the time (1,753 arrivals). The number of incidents responded to by the reserves is greater than the total number of incidents in many good sized communities.

Nationally there are over 26,000 fire departments; approximately 19,000 are volunteer organizations and 1,878 are fully career.¹ There has been a significant decline in volunteer firefighters over the past two decades. According to the National Volunteer Fire Council, the number of volunteer firefighters decreased by 10 percent between 1984 and 2003. Pennsylvania has seen the number of volunteers drop from a high of approximately 300,000 three decades ago to approximately 72,000 today. New York State has dropped from 140,000 volunteers 15 years ago to 96,000.²

According to the U.S. Fire Administration, several factors underlie today's retention and recruitment problem in the volunteer fire service. It is a complex and multifaceted problem. Although stringent training standards, leadership problems, and time constraints caused by increased family responsibilities (particularly in two-career families and single-parent households) seem to be the most common causes, there are many other factors contributing to the turnover that volunteer departments are currently facing. The problems most frequently cited by the Bureau of Labor Statistics for 2003 are:

- Lack of time (44.7%)
- Health/Medical problems (14.7%)
- Family responsibilities (9.5%)

¹ *Volunteer Fire Companies Turning to Paid Employees for Help*, Mandak, The Associated Press, 2005.

² *Number of Volunteers Declining*, Hampson, *USA Today*, 2005.

A report released by St. Joseph's University Study in 2004 cited the following as reasons volunteers left fire departments:

- No time to volunteer (92.3%)
- Conflicts in organization (47.8%)
- Organizational leadership created adverse atmosphere (46.7%)
- Too much training (45.7%)
- Attitude of existing personnel to newcomers (39.1%)
- Criticism received from officers/older members (38.0%)
- Lack of camaraderie (19.5%)³

The causes of problems cited above are similar in all 50 states according to the U.S. Fire Administration. No single region of the country is dealing with problems that are significantly different than those found in other regions. OCFA's reserve program challenges and problems are in fact similar to those being experienced throughout America's fire services.

Orange County has evolved over the past several decades from rural to urban densities. Growth has a significant impact on a community's expectations regarding the types and levels of emergency services offered and provided by its fire department. Urbanization has challenged OCFA to respond to a broad spectrum of emergency services ranging from minor medical incidents to high rise fires to a major incident involving the John Wayne Airport. In the rural areas, there is a significant year-round threat of wind driven wildland fires.

Purpose of Program

In February 2002, the OCFA Board adopted the following "definition of purpose" for the reserve program:

The purpose of the Orange County Fire Authority Reserve Program is to supplement response resources to ensure that adequate resources are available to effectively staff and equip emergency events occurring within the community. Except for select situations, this does not involve reserve resources contributing to first-due response performance, but contributing to overall emergency incident effectiveness by providing additional EMS coverage of select stations, and reinforcement through the staffing and operation of incident support resources and other specialty equipment.

³ Many respondents indicated more than one reason for leaving the organization.

Program Modifications

Significant changes were made to the program as a result of the 2002 restructuring, including the adopted *purpose of the program*. The OCFA Board adopted the program's purpose in February of 2002, which stated the reserves' role would be to supplement response resources except for select situations. This purpose does not involve reserve resources contributing to first-due response performance.

The organization developed consensus on four issues at the time of the program restructuring: 1) the program was important and should be continued, 2) reserves should be utilized in variable non-emergency roles, 3) the existing program should be changed, and 4) the reserve program should be changed to a tiered response program. Program modifications were in response to the following issues surrounding the program's purpose: retention issues, reliability, and safety. The reserve program also faced challenges when trying to meet local training requirements and state and national training standards, as well as in regard to the reserve-to-career recruitment pathway. The reserve program is a valuable component of the delivery system, and it was determined that the program would not succeed if changes were not made. OCFA developed a set of "criteria for success" statements regarding program restructuring. The program must be:

- Safe
- Needed
- Reliable
- Efficient
- Achievable and sustainable
- Accepted and supported

OCFA staff also identified eight objectives that should be accomplished during the reserve program restructuring:

1. The purpose and operating principles would be made clear.
2. Performance expectations and participation criteria would be clear.
3. Attrition would continue but would be predictable.
4. Service and safety consequences of attrition and system reliability would be reduced.
5. Training requirements would be easier to achieve.
6. Career development pathways would be enhanced and clear.
7. Goals of the new program would be achievable and sustainable.

8. Changes would continue to recognize the value of the reserve program.

The commitment and dedication of any volunteer or reserve group is based on six key elements:

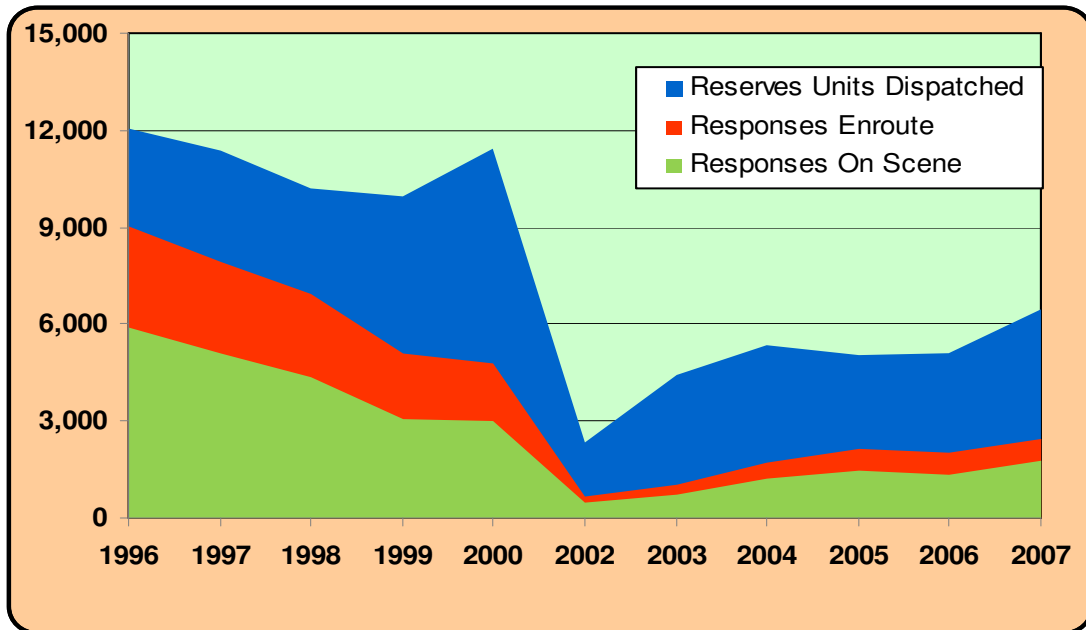
1. The experience is rewarding and worth the reserve members' time.
2. Training requirements are not excessive.
3. Time demands are adaptable and manageable.
4. Reserves are rewarded with a personal sense of value.
5. There is good leadership minimizing conflict.
6. There is ample support for the program.

At OCFA, the majority of these elements are being met at some level. The elements that are the biggest challenge to meet are two that would be associated with any large fire department's volunteer or reserve program: the ability to meet training requirements on an ongoing basis and the ability to provide ample program support.

Current Conditions & Findings

The reserve program restructuring was designed to address and resolve a number of issues. One of the biggest concerns of the past program was the reduction in reserve unit responses and arrivals on scene. Figure 1 illustrates the overall decline in reserve units responding (responses enroute) and reserve units arriving (responses on scene) from 1996 through 2007. After the restructuring in 2002, reserve response performance stabilized and has experienced modest increases in performance.

Figure 1: Reserve Emergency Response Performance



Beyond response and response reliability there are other factors that were considered and need to be reviewed in order to determine how the program is currently performing. As noted earlier, many of these were identified as criteria for success.

- Needed – As demonstrated during the Santiago Fire, the program adds considerable value to the delivery system and to the community. The potential for utilizing all available resources in Orange County during a major natural or man-made disaster or a catastrophic event is real.
- Attrition – Attrition rates continue to be high. The number of personnel leaving the organization annually compared to the number of new members entering the reserve program through the recruit academy is about a 1:1 ratio.
- Service and Safety Consequences – Both have been reduced significantly. Reliability is not as critical a factor now that the purpose of the program has been re-defined. The restructured program is safer, due to focused training for specific units. In addition, overall organizational and individual safety exposures and liabilities have been reduced through clarification of reserve duties and responsibilities.
- Achievable and Sustainable – Current data indicates the program in its current form is sustainable. Performance goals will remain difficult to achieve. The five reserve engine companies, not impacted by the restructuring, have experienced a reduction in overall performance.
- Training Requirements – Training requirements are well defined and achievable.
- Career Development Paths – Have been clarified under the restructured program.
- Recognized Value of Program – The program is definitely valued by the communities served and the vast majority of OCFA members.

Oversight

The basic questions that must be asked in providing oversight or managing a reserve program include:

- What services are being provided?
- When are the services being provided?
- Where are the services being provided?
- How reliable is the delivery of the services being provided?
- What role does the reserve program fulfill in assisting the organization in meeting its mission?
- What restrictions, if any, are currently placed on the program and its ability to be successful?

It is important that large fire departments provide management commitment and oversight of volunteer programs. This commitment can be partially measured by the assignment of a ranking officer to oversee the program. OCFA has assigned a career Battalion Chief to oversee its reserve program.

The volunteer coordinator has the responsibility to plan, organize, and coordinate the recruiting, training, and maintenance of the reserve force. Functions the volunteer coordinator would typically oversee include:

- Planning and scheduling of activities
- Determining reserve roles and assignments
- Coordinating recruitment efforts
- Maintaining records and reports
- Preparing and managing the reserve program budget
- Providing orientation program(s)
- Screening and testing
- Evaluating future needs of program
- Coordinating public relations and information
- Counseling and debriefing
- Testing and measuring
- Serving as liaison with staff and administration
- Making formal presentations

In OCFA, like all fire departments, there are areas within these functions that could be improved. The ability of the fire department to maintain reserve firefighters is directly related to its ability to manage people. The volunteer coordinator, training staff, reserve officers, and those working closely with the reserve companies must understand this concept. To maintain reserves effectively, they must continuously work towards providing an environment which, by its very nature, attracts and keeps qualified people. OCFA does a good job providing this environment. However, improvement could be made in four areas. In order to ensure future success, the program must:

1. Meet individual needs of the reserves
2. Provide its membership with reward and recognition
3. Provide adequate supervision and leadership
4. Challenge members

In addition to the volunteer coordinator's position, OCFA has allocated time for six additional positions to address reserve training and coordination. The seven positions are illustrated in Figure 2.

Figure 2: Position and Time Allocations, Reserve Program

Section	Position	# of Positions
Community Volunteer Services	Battalion Chief (a)	1
Training and Safety	Fire Captain (b)	2
Training and Safety	Fire Apparatus Engineer (b)	1
Training and Safety	Firefighter (b)	1
Emergency Medical Services	Nurse Educator (b)	2

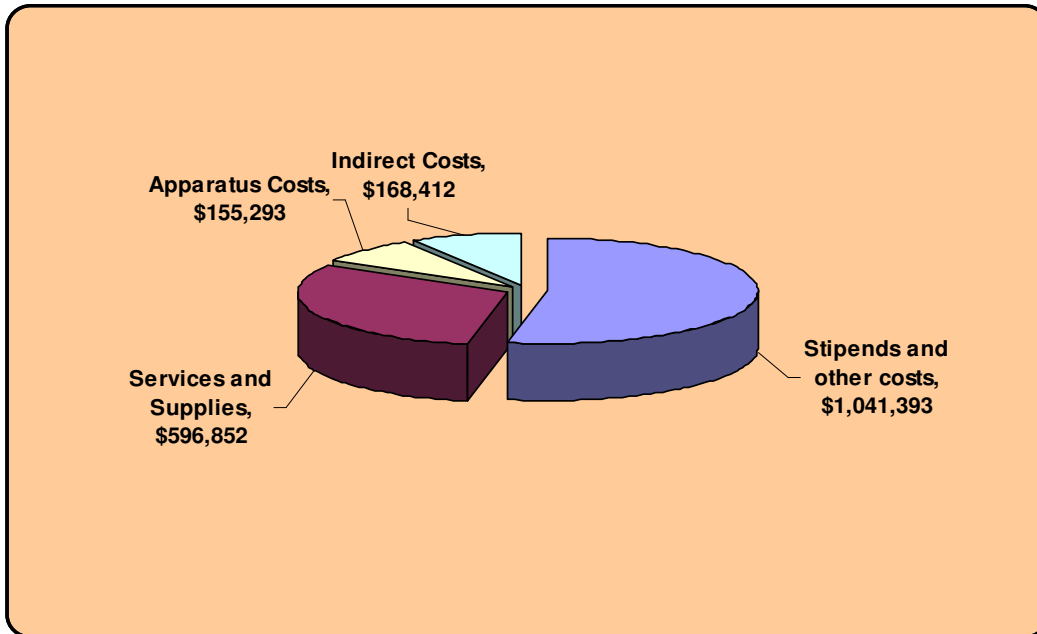
(a) 80% of the BC's time is used for the Reserve Program.

(b) 50% of one Firefighter and 50% of two Nurse Educators time is used for the Reserve Program.

Further, all of the AFTO positions provide support to reserves on overtime.

Based on ESCi's observations, the program is adequately funded. Currently the estimated cost of the program is \$1,961,950. This includes stipends and insurance, continuous service awards, regular salaries and benefits, overtime, and indirect overhead support costs. The program costs also include fuel, vehicle maintenance, vehicle replacement, personal safety equipment, and uniforms. Figure 3 provides the percentage breakdown of allocation of the estimated cost of the program by category.

Figure 3: Estimated Program Cost, by Category



The number of reserve academies is not keeping pace with the need to process, train, and assign reserves. A significant number of applicants are on the reserve waiting list, while the number of active reserves on certain units remains low. This situation creates an opportunity and environment for improvement.

It is acceptable and desirable to develop a screening process that affords the agency time to adequately conduct background checks, ensure the applicant's sincerity, and send a message to potential reserves that it is difficult to get into the organization. The application process should strike a balance between requiring an applicant to wait for the next screening and moving them through the selection process (including the recruit academy) allowing them to be a productive volunteer. The time frame for this process should be reasonable, both from the perspective of the organization and the applicant.

The adopted standard for reserve units requires response to the station within ten minutes, 80 percent of the time. From a review of recent performance, this standard is not currently being enforced. Accountability and the ability to monitor performance of stations, companies, and individuals are critical to the success of the reserve program. The posting and reporting of individual and company performance will accomplish several things. First, the organization will be able to identify individuals and companies not meeting the performance criteria, allowing

appropriate action to be taken. Second, peer pressure and the inherent need for individuals to know they are contributing at a satisfactory level will increase personal performance. Both should develop positive results for the organization.

The success of a reserve program in combination departments is also dependent on the support of career personnel. In OCFA, ensuring buy-in and support of the Battalion Chiefs is key to performance and organizational acceptance of the program. The Battalion Chiefs that supervise or support stations utilizing reserves should be actively involved in communicating with reserve officers and participating in reserve training and other activities. It is important that they be seen by the reserve membership. They can act as a conduit relative to keeping the reserves informed and answering or relaying questions or concerns. ESCi found that the senior reserve officers were generally pleased with the Battalion Chiefs who oversee their stations.

During stakeholder interviews, a significant number of senior reserve officers indicated that communication in the form of feedback and follow-up to questions and concerns could be improved. This is not uncommon in a volunteer organization, particularly if there are occasions when individuals or groups can go days or even weeks between encounters or meetings. There are *tools* that could be developed to improve two-way communication and reduce the perceived or real concerns that people are not being kept well informed. A good first step is to put things in writing (through minutes and notes) and utilize existing internal communication tools such as email to ensure everyone is kept in the loop and receives pertinent information.

Recruitment

OCFA faces a number of ongoing challenges in the recruitment and retention of reserves, including:

- Recruitment process – Currently, the recruitment process is too lengthy and is not maximizing opportunities that are either available in the communities served or in handling applicants who have shown an interest in becoming a reserve member. OCFA could do a better job in processing applications, providing ongoing communication with applicants, and providing an adequate number of timely recruit academies. This could be accomplished by establishing guidelines that specifically identify timelines and triggers that could be referred to when planning for and conducting recruit training academies.
- Attrition rate (turnover) – The current turnover rate within the system appears to be approximately 33 percent per year. Over the past three years, the number of persons entering the program through recruit academies has been equal to the number leaving the program for various reasons. It should be noted that there are many reserves on the roster who have served the organization for years. At the

same time, young reserves who are looking at the program as a vehicle to become career firefighters are leaving the program once the opportunity is offered to them.

- Changes in sociological conditions – As communities urbanize, several challenges arise regarding the recruitment and retention of reserves. These typically include a more transient population, a reduction or loss in community identity and local community pride, a reduction in available time for community members to volunteer, and the overall lack of sufficient time for many community members to volunteer.
- Internal relationships – The relationships between career and reserve personnel have an impact on the ability to recruit and retain reserve members. Career firefighters expect reserve members to be trained properly to perform the tasks they are assigned. No concerns were expressed by Battalion Chiefs interviewed relative to the training levels of the reserves based on the utilization of reserves during emergency incidents. The general consensus of senior reserves who were interviewed was that administrative staff, training division representatives, and career firefighters were supportive of the reserves.
- Aging of community-based volunteer members – An aging community is a challenge for volunteer and reserve programs. Several OCFA reserve companies have a limited population to draw from, and many of the current members of those companies are in their 50s.

Overall reserve recruitment could be improved. In the past, volunteer recruitment has been achieved by members recruiting new members. Other successful strategies include community outreach and targeted public information or awareness. OCFA typically recruits reserve members interested in a career in the fire service. Historically, OCFA reserves could take the career entrance exam after one year of service. Recently, the testing process has been modified to include “rolling recruitment,” allowing the organization to pull from a single list and isolate the reserves for recruitment purposes. This should assist in reducing the turnover rate within the reserve program and provide improved program stability.

Leadership

Every person has the need to feel important, accomplish important things, and to grow as an individual. The fire department needs to work hard at meeting these needs. Volunteers are no exception to these needs. Reserves who volunteer as firefighters are trying to fulfill one or more of the following basic needs:

- A sense of belonging to something important
- Achievement
- Economic security
- Increased responsibility
- Self-respect

- Understanding
- Challenge
- Recognition
- Reward
- Growth and development
- Need to have fun and enjoy a positive environment

In order to have a successful reserve program, the fire department should focus on and meet these needs. Many are met simply by the nature of the fire department's role as an emergency service organization. Due to the complexity and size of OCFA, it will remain a challenge to continually provide the motivational support necessary to meet the needs of the individual and/or the organization. Much of the necessary positive feedback will come from within the reserve companies themselves. It was apparent in ESCi's phone interviews with senior reserve officers that they have an awareness of the needs of their personnel and are working hard to fulfill them.

Good leadership at all organizational levels is critical to the success of a program that utilizes reserves. ESCi found that OCFA has an experienced senior reserve officer group that does a very good job of supervising and leading reserve companies.

Training

Successful training programs identify the person being trained and ensure the trainee has been trained in the tasks they are responsible to perform during emergency situations. The program must include competent instructors to deliver training and provide a reporting system that tracks the individual and group performance. The OCFA training requirements for reserve firefighters include:

- Level I – 232-hour recruit academy plus 12 hours per month continuing education
- Level II – 175-hour recruit academy plus 12 hours per month continuing education
- Level III – 133-hour recruit academy plus 12 hours per month continuing education

OCFA's established training requirements for community-based reserves are nearing the amount of time an organization could expect to require of its reserves. Training requirements for members entering the program, with the intent of utilizing the experience as a means to become eligible to take the career entrance examination, appear to be acceptable. ESCi

received significant input from senior reserve officers relative to training and the training academy:

- It is essential that reserves are trained to safely handle any tasks they may be assigned. The hours required for initial recruit training and ongoing training and maintenance of skills is significant. In recent years, national training standards and government mandates have required an increase in the number and duration of training sessions.
- Firefighters are expected to respond to a myriad of incident types.⁴ Consequently, it is becoming increasingly difficult to train reserves in all of the potential incident types to which they are expected to respond. The goal of increasing training requirements to meet those response requirements and create a safer, more effective response force is a good one. ESCi believes that increasing the minimal level of training to Level II deserves consideration. The key is being able to strike the balance between the organizational need to increase training to the highest level possible while at the same time ensuring the requirement is obtainable by the reserve membership.
- The general consensus of the senior reserve officers interviewed and ESCi's observations is that OCFA's training program(s) and recruit academies are conducted and managed very well. The quality of training delivered within the program is very good.

There are several items that ESCi recommends for change. These would include conducting academies on a more frequent basis, accelerating the time taken to complete the academy, overlap academies to provide for more opportunities to move through various certification levels, and consider the possibility of establishing Level II as the minimal level of entrance training for reserves. Additionally, the schedules of six personnel supporting the reserve program within the training and safety section and the emergency medical services section may need to be reviewed to more closely align their routine workday to the evening and weekend schedules associated with the delivery of training to the reserves. This could reduce the overall cost of delivering training by reducing the overtime requirements.

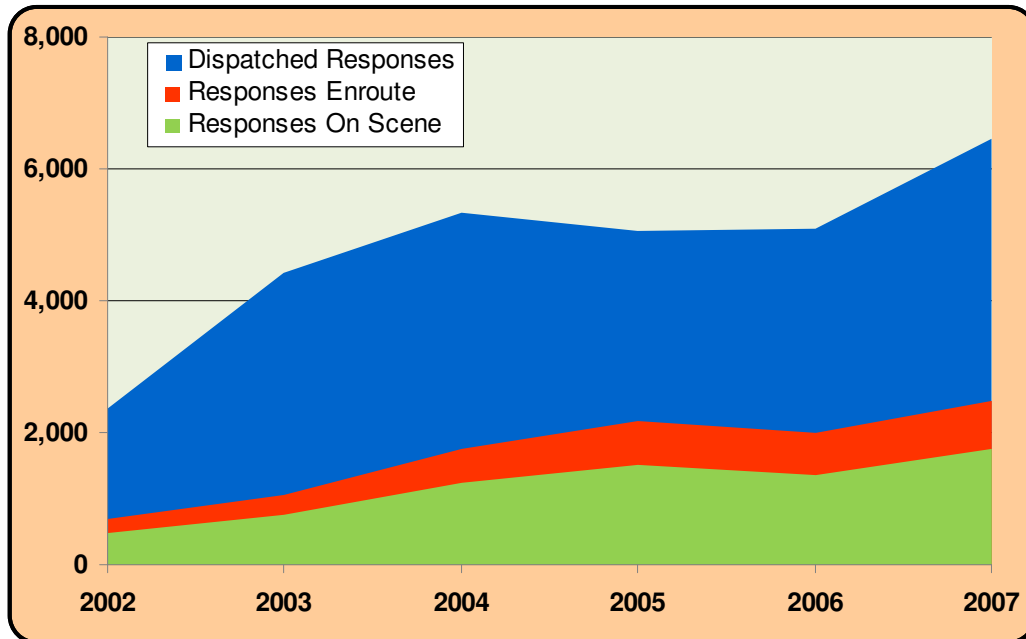
Utilization

Reserve units were dispatched to 6,443 calls in 2007. While this represents a relatively small number of total calls handled by OCFA, the number is significant. It is worth noting that this workload would constitute a significant call volume for the vast majority of fire departments in this country.

⁴ Reserves (volunteers) are expected to prepare for response to fires, medical problems, technical rescues, hazardous materials, natural disasters, chemical, biological, radiation, and nuclear incidents.

There are many reasons why a reserve company might fail to respond. This could include a lack of availability (particularly during day time hours), the reserve company sensing it will not be needed, or being dropped from the call prior to responding with the unit. Figure 4 illustrates the total number of dispatched responses in comparison to the number of times a unit went enroute and the number of times a unit arrived on scene.

Figure 4: Reserve Workload, 2002 - 2007

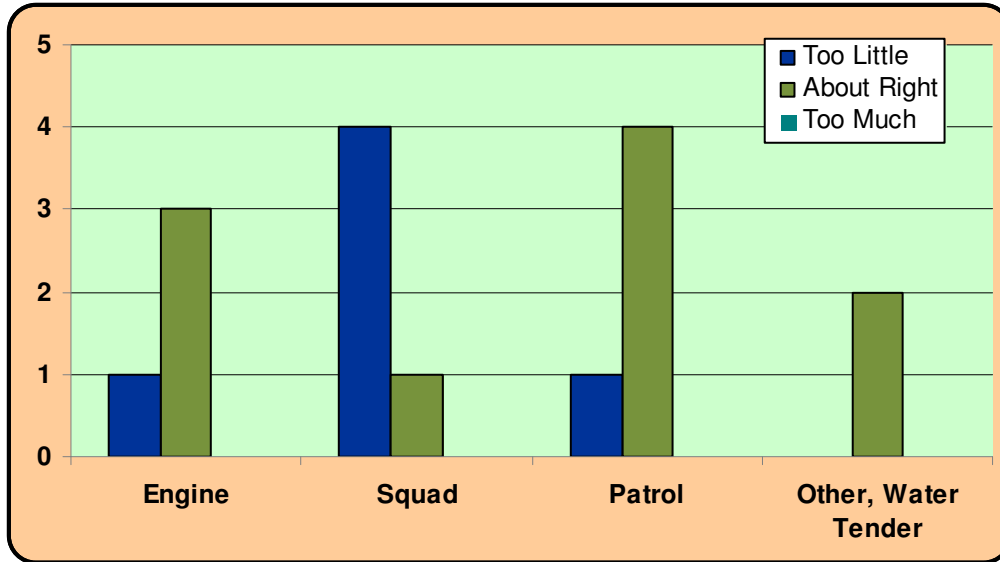


The level of utilization of reserve stations and companies was a specific question asked of senior reserve officers during the phone interviews. ESCi asked if the units were utilized too little, about right, or too much. As might be expected, the responses varied based on location and type of unit. For example, the majority of the senior officers overseeing squads indicated that they were under-utilized. The primary reason identified regarding under utilization was the units were not used on the fireground to the level the senior officers considered appropriate. Specifically, the senior officers (those overseeing squads) felt they could provide additional assistance in hose handling and ladder evolutions. The majority of reserve engine companies felt they were utilized *about right*, as was the case with patrols and water tenders.

Other factors included such issues as whether or not units were on a select call dispatch protocol (two stations are being dispatched on this basis), training levels, and availability of reserves at a specific station. Training levels or certifications become significant factors in

responding an engine. Current policy requires a certified officer, driver, and firefighter for an engine to leave the station. Figure 5 illustrates stakeholder feedback regarding utilization of specific companies as described by senior reserve officers assigned to the station or unit.

Figure 5: Reserve Company Utilization by Unit Type



Federal legislation has had a significant impact on fire department use of volunteers and reserves. In 1985, the U.S. Supreme Court ruled that Fair Labor Standards Act (FLSA) requirements apply to state and local government employees. This ruling led to a significant reduction in the ability to use volunteers and off-duty career personnel.

Response reliability is also an important consideration when evaluating program effectiveness. At OCFA it is important to take into consideration reserve program performance when discussing reliability. ESCi evaluated the performance of the five engines that were not impacted by the 2002 restructuring. The performance of those units has decreased, which is consistent with national trends. Based on the current purpose of the program, overall response reliability is satisfactory. It would not be considered satisfactory as a first responder delivery system.

Challenges

Even the best volunteer programs face many challenging situations. These challenges can be categorized in two different areas: physical and psychological. Physical problems include availability of volunteers, attrition, lack of training time, and lack of interested citizens to recruit

(particularly in remote areas). These problems, for the most part, are unavoidable and require creative problem solving. On the other hand, psychological problems such as attitude, morale, and a sense of accomplishment through dedication and teamwork are areas which need to be addressed and handled effectively in a good volunteer program.

The number of challenges facing volunteer or combination career/volunteer fire departments have increased over the past several decades. OCFA, as with most fire departments utilizing volunteers, is challenged by some if not all of the following issues:

- High turnover rate (attrition).
- Increased difficulty in recruiting and training members, particularly in geographically challenging areas.
- Difficulty for the member to commit the time required for training and emergency call response.
- Reliability of response.
- Compliance with government regulations and increased industry and national standards.
- Lack of qualified and experienced supervisors necessary to fulfill future leadership roles within the reserve officer ranks.
- Internal and external apathy towards the reserve component of the delivery system.
- Poor relationships between some career and reserve members.

There is a tremendous need for staffing during the first few minutes of most structural fires and for sustainable operations during major events, such as the recent wildland fires in Southern California. Few departments can respond and commit the necessary reserve staffing to handle tasks in a systematic, timely fashion. In most cases, it is difficult for volunteers to sustain a long-term effort during a large ongoing incident. In the case of OCFA, few reserves can afford to leave their jobs and other commitments for several days during sustained and large scale incidents. However, it is important to note that some reserves did sustain multi-day efforts during the Santiago Fire.

The challenges facing OCFA relative to the reserve program are not dissimilar to those faced by most organizations utilizing volunteer personnel. These would include availability of reserve members, particularly during daytime periods Monday through Friday, turnover rates, meeting ongoing training requirements, and the ability to maintain skill levels with limited practical on scene experience. OCFA also has several unique challenges that it must address due to the size and complexity of its delivery system. These would include ongoing attention to the

relationship between career and reserve members and acceptance of the board-approved reserve program mission.

Strengths

The OCFA Reserve Program has a number of strengths. These include:

- Providing a cost effective alternative to staffing in remote or isolated areas that routinely have a limited first response workload.
- Providing depth of service and coverage during extended emergency operations such as the Santiago Fire of 2007.
- Providing locally controlled first responders during a human-caused or natural disaster in the jurisdiction, region, or state.

The wealth of experience within the reserve program is also a strength. Many senior reserves have much more experience in dealing with major incidents than some of the newer career firefighters. The fact that many of the reserve companies are community-based, particularly in the remote areas, provides local knowledge and an appreciation for the needs of the community. And lastly, the reserve program provides station coverage and support when the career companies are committed on routine alarms or during prolonged incidents.

Opportunities

Opportunities exist to enhance the reserve program through implementation of many of the recommendations in this report. Areas that would have the most impact on overall program effectiveness would include:

- Incorporating measures to reduce turnover rates.
- Optimizing reserve academies and training.
- Affording specific companies the opportunity to cover their home based station during predictable activities (such as TAG training) or extended activities that can be scheduled or planned.
- Additional utilization of reserve responders during structural fire calls (external support).
- The utilization of reserve members in areas of fire prevention and community education programs.
- Fuel modification efforts could be enhanced by the involvement of reserve companies or members.

Threats

A significant threat to the OCFA reserve program is the aging of its senior reserve officers. Many senior members have been in the program for 20 to 25 years, and their eventual retirement from the system will create a problem. It may be very difficult to replace some of them, particularly in situations where an engine or other unit is a stand alone or recruitment efforts are dependent on persons living in close proximity to the stations.

The ongoing relationship between career and reserve members must be maintained in order to ensure recognition of the vital role the reserve program serves in the organization. It is important for both to keep in mind the purpose of the reserve program and what the additional response and capabilities of the reserve program could mean to the OCFA, particularly during a catastrophic event.

Future Considerations

It would be helpful for management to clearly articulate organizational expectations of the reserves. This can be translated into the expectations reserves have when they offer their time and energy to work for OCFA. At a minimum, OCFA should articulate the following expectations:

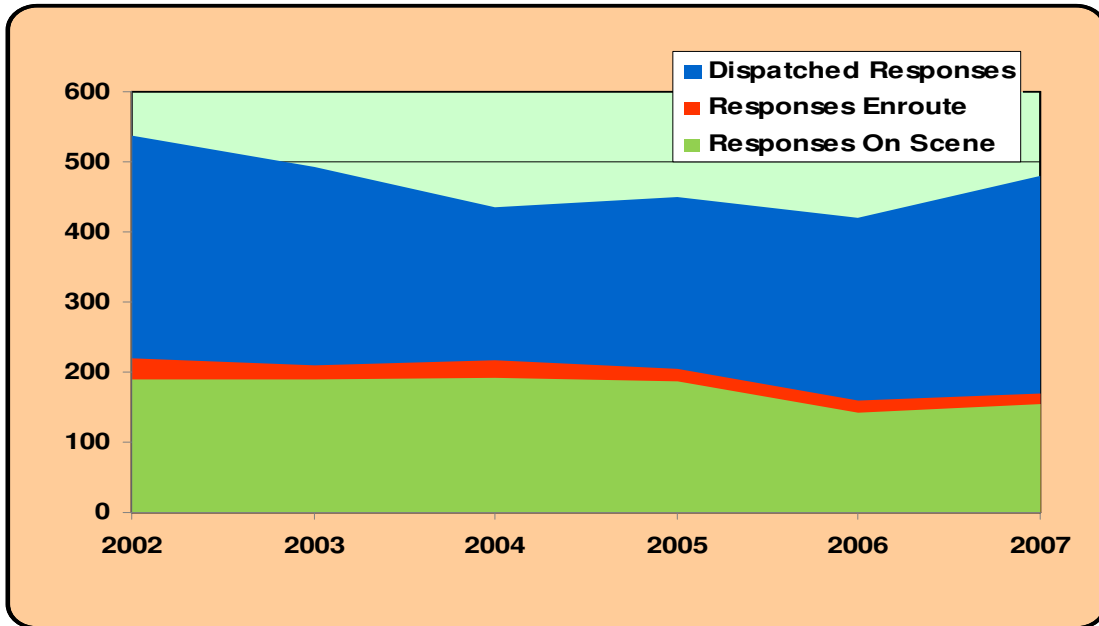
- Price – The cost to the reserve in out-of-pocket expenses, time, energy, and physical/emotional drain.
- Delivery – When, where, and how a reserve might expect to be utilized and to what level he or she will be asked to perform the assigned duties.
- Technical Support – How the reserve will be trained, who will help them, who will oversee their efforts, and how other OCFA staff—especially career—will work with them.

Reserve companies that find themselves with low numbers of active members would be benefited by OCFA efforts to streamline reserve academies and training. The hour requirements are to a large degree set by standards. The pace of the academy should be based on competency and should be accelerated whenever possible.

As part of the 2002 restructuring, OCFA retained five reserve engines within its delivery system. ESCi analyzed the performance of the five units for the past five years. It was determined that the total number of dispatched responses for the engines has remained relatively consistent. However, the dispatched to enroute percentage for the combined units dropped from 43 percent

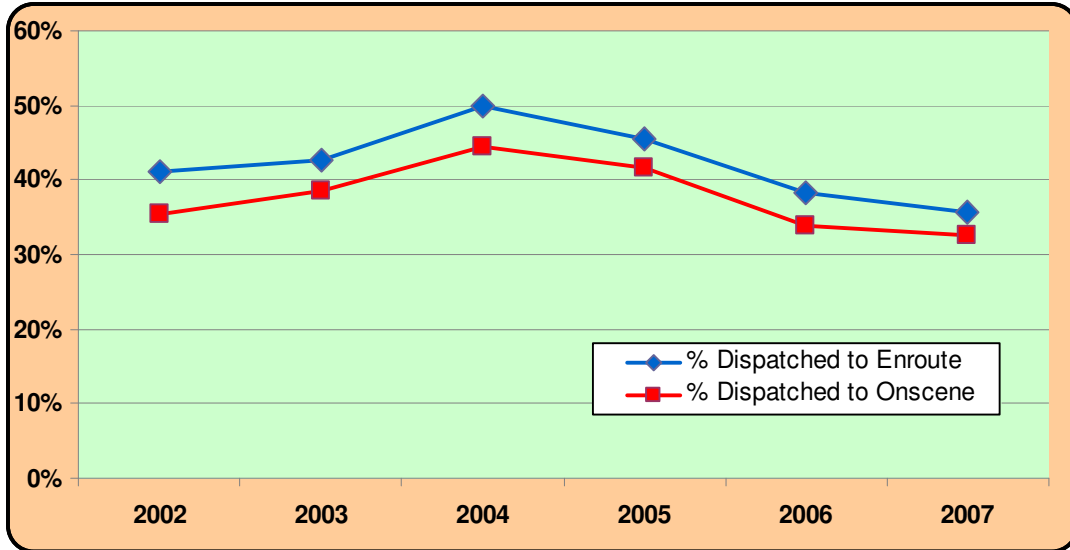
to 36 percent. Also, the dispatched to on scene performance dropped from 39 percent to 33 percent over the same period. Figure 6 illustrates these differences.

Figure 6: Dispatched, Enroute, and On Scene Performance, 2002 - 2007



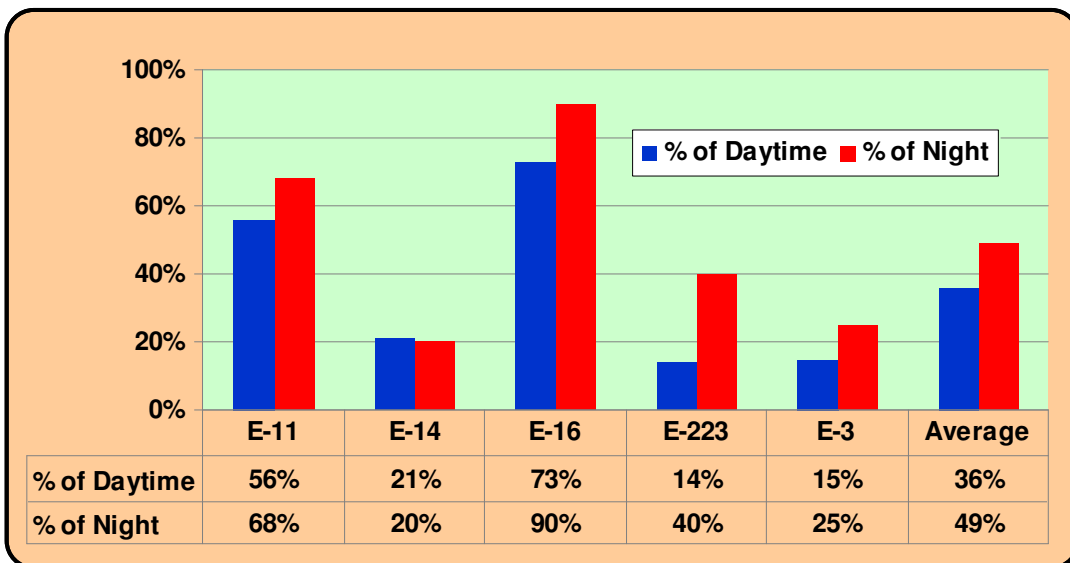
The dispatched to enroute and dispatched to on scene for the five reserve engines has declined at a paralleled rate since 2004. Figure 7 provides an illustration of this trend.

Figure 7: Enroute vs. On Scene Performance, 2002 - 2007



ESCi reviewed the reliability of response for each of the five reserve engines that were left in service as a result of the 2002 restructure. In most volunteer programs there is a noticeable difference in company reliability for Monday through Friday daytime responses and evenings and weekends. As illustrated in Figure 8, the average enroute percentages drop from 49 percent night time response to 36 percent daytime response.

Figure 8: Day vs. Night Enroute Performance



As noted earlier, there are several reasons for the failure of an engine to respond or actually arrive at the emergency scene. Reasons could include being turned around by a first arriving company or non-availability of the proper mixture of rank and certification of members who respond to the station (i.e., certified officer, driver, firefighter). The five-year average response performance for each specific engine dispatched versus arrival on scene is as follows:

- Engine 328%
- Engine 1159%
- Engine 1421%
- Engine 1653%
- Engine 223 ...21%

After OCFA increases the frequency of its training academies and fills station rosters, ESCi recommends that the current five reserve engine configuration be re-examined periodically. The criteria reviewed should include response performance, incident activity and type, and unit effectiveness to determine if a different unit type would be more effective.

A recommendation made by several senior reserve officers was the addition of a structured, mandatory ride-along program for reserves. Such a program would enhance the reserve members' skills and abilities, while providing career and reserve members an opportunity to get to know each other better. This would most likely increase awareness level and appreciation between the groups.

Reserve member turnover rate is very high. Over the past three years, the number of personnel exiting the program and the number of personnel attending the academy are almost equal. This translates to a 100 percent turnover rate every three years.

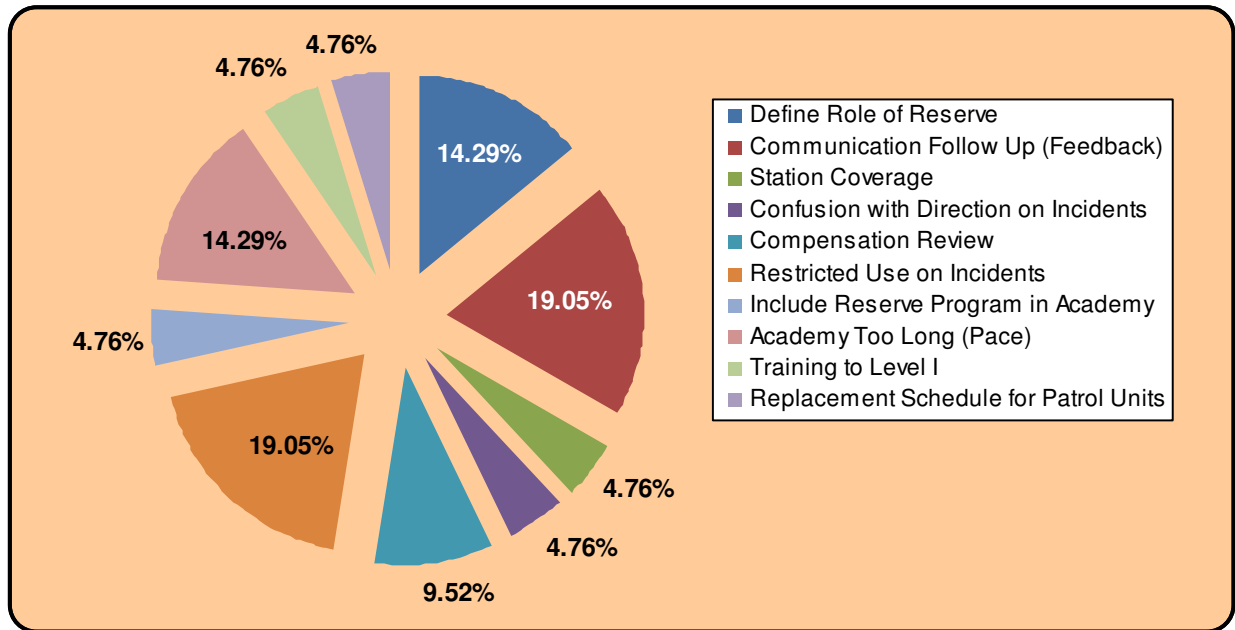
As is the case in most organizations, communication, follow up, and feedback could be improved. Overall, the administrative personnel, volunteer coordinator, and Battalion Chiefs received good ratings regarding *support of the reserve program* from those interviewed. Areas that should be improved include clearly articulating the mission and role of reserves to all members of the organization and ensuring this message is incorporated into all recruit academies. One frustration throughout the operations division is an understanding of the role and capabilities of reserves, particularly during firefighting emergencies.

The stipend paid to reserve firefighters came up in several of the interviews conducted by ESCi. The general feeling is that the current stipend of \$5 for an emergency response is inadequate. The stipend amount becomes more problematic during sustained incidents even though there are increases for responses that exceed 8 hours and 16 hours. Obviously, the recent Santiago Fire was fresh in the minds of those interviewed and was used as an example of perceived or real inequities within the system. The reserve members are obviously not involved or participating for the money; at the same time, it is important for reserves to feel that the system is fair. This is an area that should be reviewed.

The organization should ensure that legitimate questions asked at the station level are addressed in a timely manner. It was reported that many times questions are raised and the response is, *"I'll look into it and get back to you."* The prevailing perception is there has been occasions where follow up did not take place. Admittedly, depending on the complexity of the question, it may be difficult to get an answer; in some instances, there simply is no answer. Whenever possible officers and staff should involve the volunteer coordinator to ensure he is aware of the question or concern and that he will personally follow up with the reserves or delegate it to the appropriate person. An approach such as this should improve two-way communication, increase the consistency and accuracy of information shared, and ensure that a response and/or answer would be forthcoming.

During the course of the personal and phone interviews, many valuable suggestions were provided. The following chart, Figure 9, summarizes the areas which could be modified for the program to be more effective or more appropriately meet organizational and/or reserve members' needs. The percentage attached to each item provides a sense of how many members had a similar suggestion or recommendation.

Figure 9: Suggested Modifications Provided by Senior Reserve Officers



It is important to articulate the purpose of the program at all organization levels. It is our opinion that the purpose of the program is being accomplished and the program restructuring in 2002 has been successful. Necessary modifications or improvements should be integrated into OCFA's 2008 strategic planning process.

Implementation Strategies

The strategies, developed as an output of this report, fall under three categories: strategic considerations, operational considerations, and support considerations. Strategic changes and modifications can be managed through an established divisional plan, a work plan specifically developed for the reserve program, or through the 2008 strategic planning process. Operational considerations should be forwarded through the Operations Department Assistant Chief for review and implementation. Support considerations should go through appropriate logistics and support staff.

Recommendations

As a result of this "report card" review of the OCFA reserve program, ESCi has developed the following list of recommendations:

Figure 10: Reserve Program Recommendations

- Publicize reserve program individual and company performance. Modify if necessary and enforce the performance standard for reserve response to stations.
- Conduct reserve training academies on a more frequent basis. Overlap academies so members have more opportunities to move through Level II and III. Consider establishing Level II as the minimum entrance training.
- Review the work schedule of the training officers and emergency medical services personnel to better align their hours of work with the scheduled times of training delivery to reserve members (evenings and weekends).
- Clearly articulate the reserves' role and expectations to all OCFA members.
- Evaluate the reserve apparatus configuration at least every five years.
- Review the possibility of a mandatory ride-along program for reserves.
- Re-exam the current five reserve engine configuration periodically based on need and reliability.
- Review the reserve compensation system.
- Reserve apparatus and safety equipment should be included in replacement plans.
- A system should be developed to track and follow-up on questions asked by reserve officers and reserve companies.
- Include modifications to the reserve program in OCFA's 2008 strategic planning process.

Appendix (Response Data by Unit)



Reserve Report

2002-2007 Response Data by Unit:

- Summary of Calls Dispatched, Enroute, and Onscene with percentages by unit/by year

2007 Average Turnout and Travel:

- Summary of Calls Dispatched, Enroute, and Onscene with average Turnout and Travel Times by Unit

2007 Day and Night Responses:

- Graphs grouped by Engine, Squad, Patrol, Water Tender, Air Utility depicting calls Dispatched, Enroute and Onscene by Day or by Night

2007 Day of Week Responses:

- Individual Graphs per unit depicting calls Dispatched, Enroute and Onscene by Day of Week

July 29, 2008



Orange County Fire Authority

Reserve Responses 2002-2007

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
A2					
2002	44	12	27%	11	25%
2003	45	16	36%	14	31%
2004	41	14	34%	13	32%
2005	43	13	30%	11	26%
2006	36	7	19%	5	14%
2007	22	6	27%	6	27%
A30					
2002	56	15	27%	10	18%
2003	34	17	50%	13	38%
2004	44	16	36%	12	27%
2005	61	29	48%	22	36%
2006	34	13	38%	7	21%
2007	30	16	53%	10	33%
E11					
2002	142	83	58%	84	59%
2003	138	81	59%	79	57%
2004	112	63	56%	67	60%
2005	113	67	59%	71	63%
2006	93	50	54%	55	59%
2007	84	50	60%	49	58%
E14					
2002	68	28	41%	24	35%
2003	42	7	17%	7	17%
2004	51	16	31%	13	25%
2005	40	10	25%	9	23%
2006	57	5	9%	5	9%
2007	58	12	21%	11	19%
E16					
2002	67	44	66%	32	48%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
2003	75	61	81%	49	65%
2004	57	43	75%	31	54%
2005	61	41	67%	32	52%
2006	62	48	77%	27	44%
2007	80	62	78%	43	54%
E223					
2002	84	38	45%	22	26%
2003	75	26	35%	17	23%
2004	46	17	37%	14	30%
2005	36	9	25%	5	14%
2006	44	7	16%	6	14%
2007	74	14	19%	13	18%
E3					
2002	177	28	16%	28	16%
2003	162	35	22%	38	23%
2004	169	78	46%	68	40%
2005	201	78	39%	71	35%
2006	164	51	31%	49	30%
2007	184	33	18%	40	22%
G18					
2006	2	0	0%	0	0%
2007	67	5	7%	7	10%
G52					
2002	2	0	0%	0	0%
2003	69	24	35%	13	19%
2004	70	22	31%	15	21%
2005	39	19	49%	15	38%
HT241					
2002	14	12	86%	10	71%
2003	6	6	100%	3	50%
2004	8	6	75%	0	0%
2005	1	1	100%	0	0%
2006	2	1	50%	1	50%
2007	2	2	100%	1	50%
HT41					
2002	20	8	40%	4	20%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
2003	10	6	60%	0	0%
2004	17	12	71%	2	12%
2005	17	15	88%	4	24%
2006	15	12	80%	4	27%
2007	19	12	63%	4	21%
P10					
2002	1	0	0%	0	0%
2003	60	22	37%	14	23%
2004	196	87	44%	64	33%
2005	201	112	56%	77	38%
2006	174	52	30%	35	20%
2007	255	111	44%	78	31%
P11					
2002	41	32	78%	20	49%
2003	50	25	50%	23	46%
2004	113	46	41%	46	41%
2005	97	35	36%	33	34%
2006	98	45	46%	34	35%
2007	89	49	55%	39	44%
P14					
2002	17	8	47%	2	12%
2003	3	2	67%	0	0%
2004	51	27	53%	21	41%
2005	47	30	64%	23	49%
2006	62	33	53%	26	42%
2007	62	37	60%	32	52%
P16					
2002	30	21	70%	13	43%
2003	7	5	71%	3	43%
2004	63	32	51%	20	32%
2005	66	41	62%	28	42%
2006	68	53	78%	36	53%
2007	90	67	74%	51	57%
P18					
2002	11	3	27%	1	9%
2003	28	7	25%	4	14%
2004	84	31	37%	12	14%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
2005	77	40	52%	13	17%
2006	73	31	42%	10	14%
2007	147	87	59%	52	35%
P21					
2003	141	48	34%	35	25%
2004	374	104	28%	74	20%
2005	424	97	23%	81	19%
2006	475	103	22%	77	16%
2007	558	169	30%	135	24%
P23					
2003	5	0	0%	0	0%
2004	21	3	14%	2	10%
2005	44	14	32%	12	27%
2006	72	22	31%	13	18%
2007	102	21	21%	13	13%
P26					
2003	157	85	54%	58	37%
2004	412	195	47%	124	30%
2005	423	210	50%	121	29%
2006	460	261	57%	170	37%
2007	484	329	68%	212	44%
P30					
2003	69	13	19%	10	14%
2004	235	23	10%	14	6%
2005	224	61	27%	36	16%
2006	258	84	33%	55	21%
2007	297	85	29%	57	19%
P32					
2003	43	20	47%	12	28%
2004	136	82	60%	57	42%
2005	167	108	65%	68	41%
2006	125	71	57%	55	44%
2007	170	55	32%	40	24%
P40					
2003	19	6	32%	3	16%
2004	61	24	39%	17	28%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
2005	71	45	63%	34	48%
2006	74	37	50%	26	35%
2007	134	70	52%	46	34%
P7					
2003	168	74	44%	33	20%
2004	397	165	42%	88	22%
2005	500	282	56%	157	31%
2006	458	229	50%	126	28%
2007	544	286	53%	168	31%
S13					
2003	114	18	16%	12	11%
2004	307	40	13%	33	11%
2005	302	42	14%	34	11%
2006	271	53	20%	41	15%
2007	256	9	4%	8	3%
S14					
2002	33	10	30%	10	30%
2003	32	10	31%	9	28%
2006	1	0	0%	0	0%
2007	5	2	40%	2	40%
S16					
2002	21	11	52%	13	62%
2003	47	22	47%	21	45%
2004	1	0	0%	0	0%
2005	1	1	100%	0	0%
2006	1	0	0%	0	0%
S19					
2002	375	72	19%	38	10%
2003	806	41	5%	30	4%
2004	604	23	4%	17	3%
2006	216	97	45%	70	32%
2007	782	95	12%	69	9%
S2					
2002	124	8	6%	6	5%
2003	227	21	9%	18	8%
2004	227	39	17%	29	13%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
2005	272	73	27%	61	22%
2006	255	64	25%	50	20%
2007	267	60	22%	48	18%
S21					
2002	304	66	22%	47	15%
2003	332	36	11%	23	7%
2005	14	1	7%	1	7%
2006	11	2	18%	1	9%
2007	51	10	20%	10	20%
S24					
2002	294	56	19%	24	8%
2003	600	79	13%	40	7%
2004	593	222	37%	166	28%
2005	691	325	47%	226	33%
2006	650	303	47%	194	30%
2007	661	346	52%	242	37%
S25					
2002	174	51	29%	32	18%
2003	440	94	21%	67	15%
2004	434	131	30%	83	19%
2005	403	160	40%	115	29%
2006	383	102	27%	65	17%
2007	369	157	43%	114	31%
S3					
2002	69	23	33%	28	41%
2003	161	77	48%	76	47%
2004	142	62	44%	58	41%
2005	182	92	51%	82	45%
2006	148	56	38%	52	35%
2007	190	70	37%	88	46%
S44					
2003	9	7	78%	2	22%
2004	60	44	73%	27	45%
2005	75	55	73%	30	40%
2006	66	38	58%	30	45%
2007	82	38	46%	24	29%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
W10					
2002	36	11	31%	6	17%
2003	43	13	30%	3	7%
2004	38	18	47%	13	34%
2005	27	12	44%	6	22%
2006	32	6	19%	2	6%
2007	53	7	13%	4	8%
W16					
2002	28	17	61%	12	43%
2003	41	25	61%	8	20%
2004	35	26	74%	13	37%
2005	23	17	74%	5	22%
2006	40	33	83%	11	28%
2007	44	38	86%	9	20%
W18					
2007	3	1	33%	2	67%
W21					
2004	6	0	0%	0	0%
2005	29	0	0%	0	0%
2006	5	1	20%	1	20%
W40					
2002	53	9	17%	2	4%
2003	50	16	32%	5	10%
2004	43	9	21%	6	14%
2005	37	19	51%	7	19%
2006	44	19	43%	8	18%
2007	60	26	43%	11	18%
W41					
2002	2	1	50%	0	0%
W52					
2002	2	0	0%	1	50%
2003	46	0	0%	0	0%
2004	17	0	0%	0	0%
W7					
2002	60	20	33%	13	22%

<u>Unit ID</u>	<u>Dispatched Responses</u>	<u>Responses Enroute</u>	<u>% Dispatched to Enroute</u>	<u>Responses Onscene</u>	<u>% Dispatched to Onscene</u>
2003	65	23	35%	14	22%
2004	57	22	39%	11	19%
2005	43	24	56%	12	28%
2006	51	26	51%	13	25%
2007	67	37	55%	15	22%
Z2					
2002	2	0	0%	0	0%
2003	7	6	86%	1	14%
2004	6	3	50%	1	17%
2005	6	2	33%	0	0%
2006	1	0	0%	0	0%
2007	1	1	100%	0	0%
<u>Totals by Year</u>					
2002	2,351	687	29%	493	21%
2003	4,426	1,074	24%	757	17%
2004	5,328	1,745	33%	1,231	23%
2005	5,058	2,180	43%	1,502	30%
2006	5,081	2,015	40%	1,360	27%
2007	6,443	2,475	38%	1,753	27%
<u>Total</u>	28,687	10,176	35%	7,096	25%

2007 Average Turnout and Travel:

- Summary of Calls Dispatched, Enroute, and Onscene with average Turnout and Travel Times by Unit

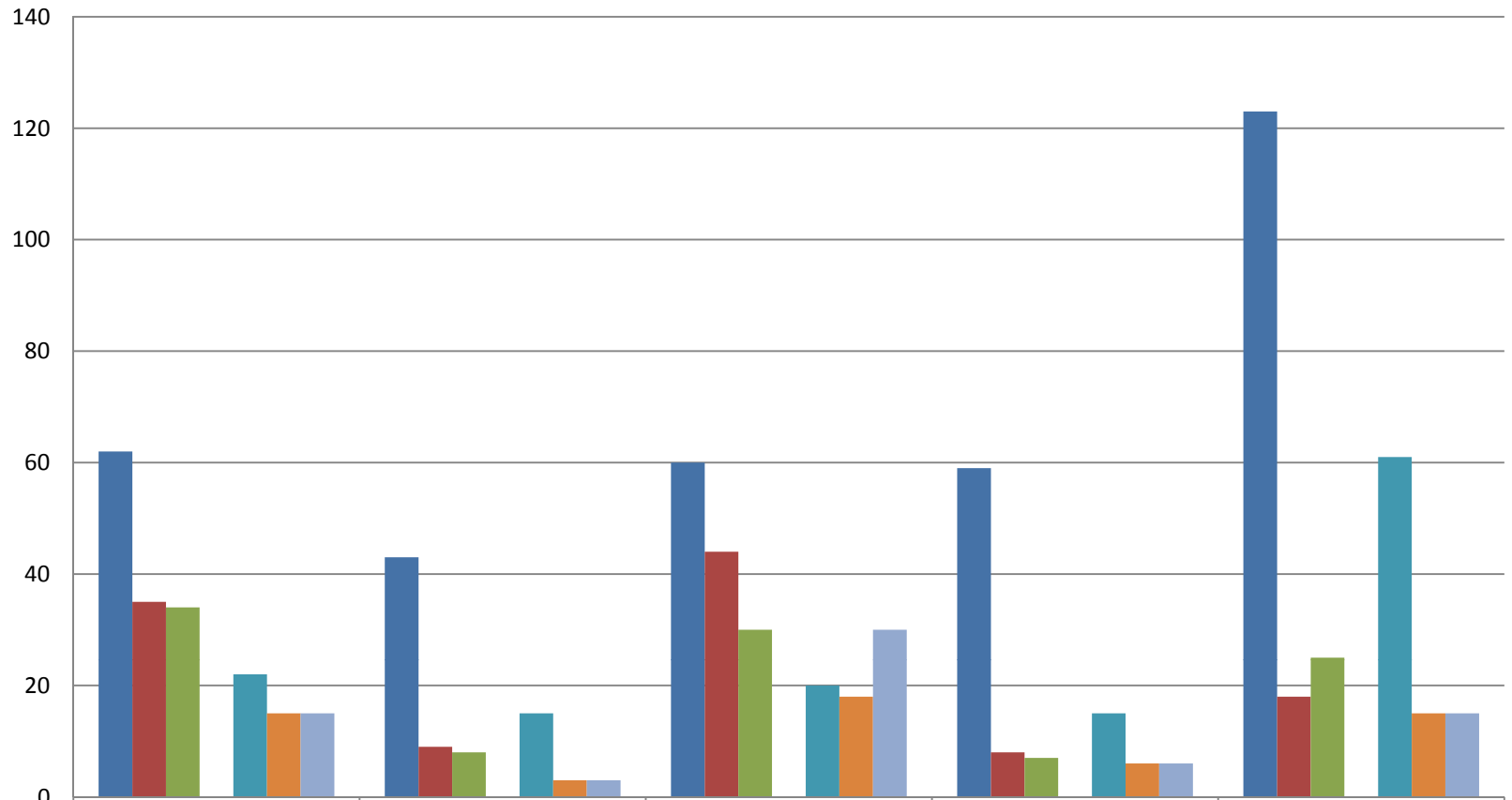
2007 Reserve Summary Report

	Dispatches	Enroutes	%of Disp ER	Avg Turnout	OnScenes	% of Disp OS	Avg Travel
A2	22	6	27%	0:07:25	6	27%	0:19:31
A30	30	16	53%	0:13:32	10	33%	0:16:24
E11	84	50	60%	0:03:03	49	58%	0:02:52
E14	58	12	21%	0:07:25	11	19%	0:02:54
E16	80	62	78%	0:11:11	43	54%	0:08:18
E223	74	14	19%	0:07:29	13	18%	0:03:17
E3	184	33	18%	0:02:33	40	22%	0:04:02
G18	67	5	7%	0:17:45	7	10%	0:39:27
HT241	2	2	100%	0:00:02	1	50%	2:02:01
HT41	19	12	63%	0:34:48	4	21%	0:34:06
P10	255	111	44%	0:03:54	78	31%	0:08:26
P11	89	49	55%	0:03:10	39	44%	0:06:45
P14	62	37	60%	0:06:17	32	52%	0:10:09
P16	90	67	74%	0:12:35	51	57%	0:00:39
P18	147	87	59%	0:15:51	52	35%	0:07:33
P21	558	169	30%	0:02:15	135	24%	0:04:48
P23	102	21	21%	0:08:08	13	13%	0:12:53
P26	484	329	68%	0:02:48	212	44%	0:05:58
P30	297	85	29%	0:05:49	57	19%	0:10:41
P32	170	55	32%	0:05:01	40	24%	0:07:40
P40	134	70	52%	0:05:55	46	34%	0:11:55
P7	544	286	53%	0:07:57	168	31%	0:02:30
S13	256	9	4%	0:33:00	8	3%	0:04:45
S14	5	2	40%	0:07:19	2	40%	0:05:39
S19	782	95	12%	0:03:00	69	9%	0:07:33
S2	267	60	22%	0:02:24	48	18%	0:04:15
S21	51	10	20%	0:03:41	10	20%	0:03:43
S24	661	346	52%	0:02:46	242	37%	0:05:46
S25	369	157	43%	0:02:39	114	31%	0:03:46
S3	190	70	37%	0:04:00	88	46%	0:03:08
S44	82	38	46%	0:04:15	24	29%	0:03:59
W10	53	7	13%	0:05:03	4	8%	0:21:26
W16	44	38	86%	0:04:34	9	20%	0:27:06
W40	60	26	43%	0:17:52	11	18%	0:26:20
W7	67	37	55%	0:10:46	15	22%	0:22:20
Z2	1	1	100%		0	0%	
Total 2007	6,443	2,475	38%		1,751	27%	

2007 Day and Night Responses:

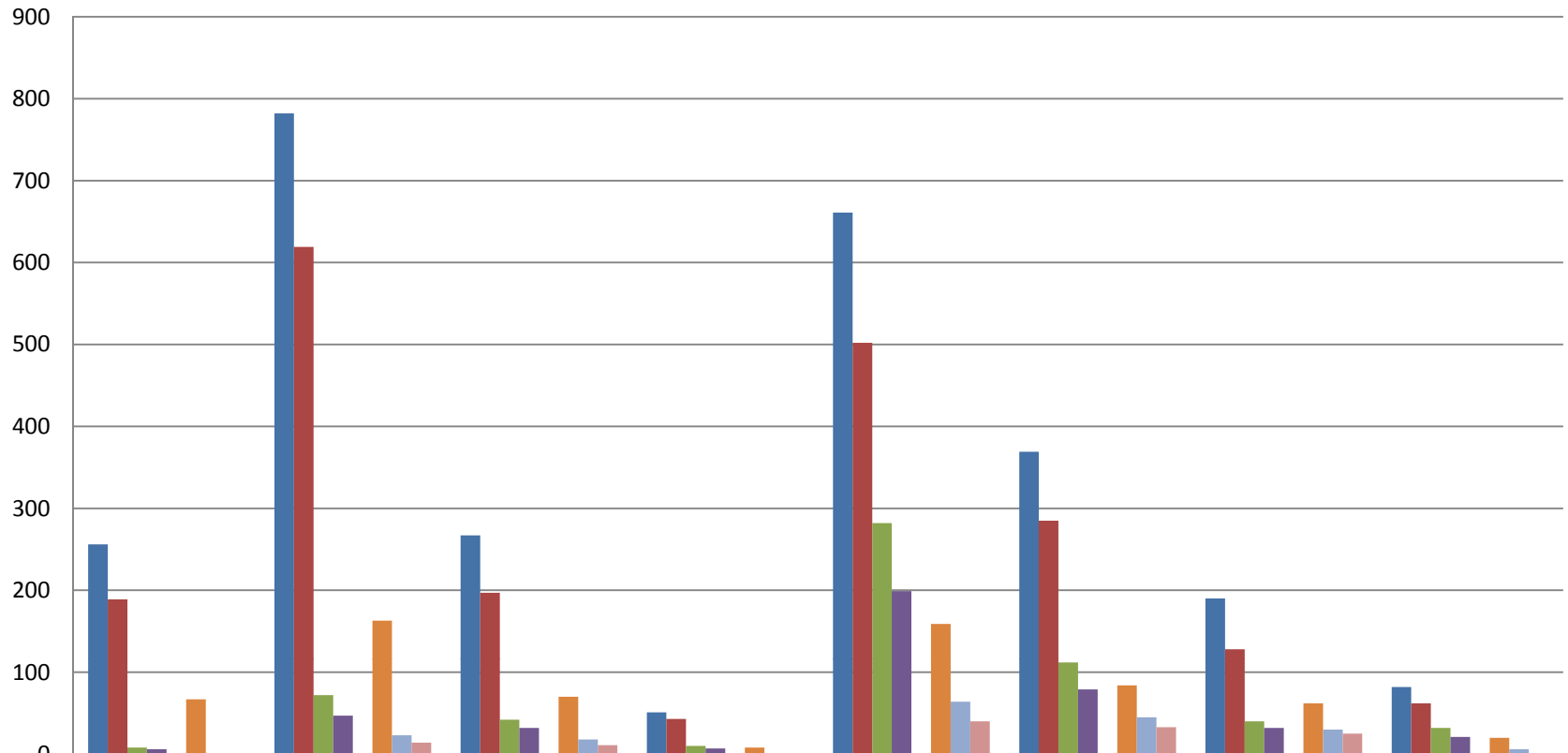
- Graphs grouped by Engine, Squad, Patrol, Water Tender, Air Utility depicting calls Dispatched, Enroute and Onscene by Day or by Night

Engine Day Vs Night Responses 2007



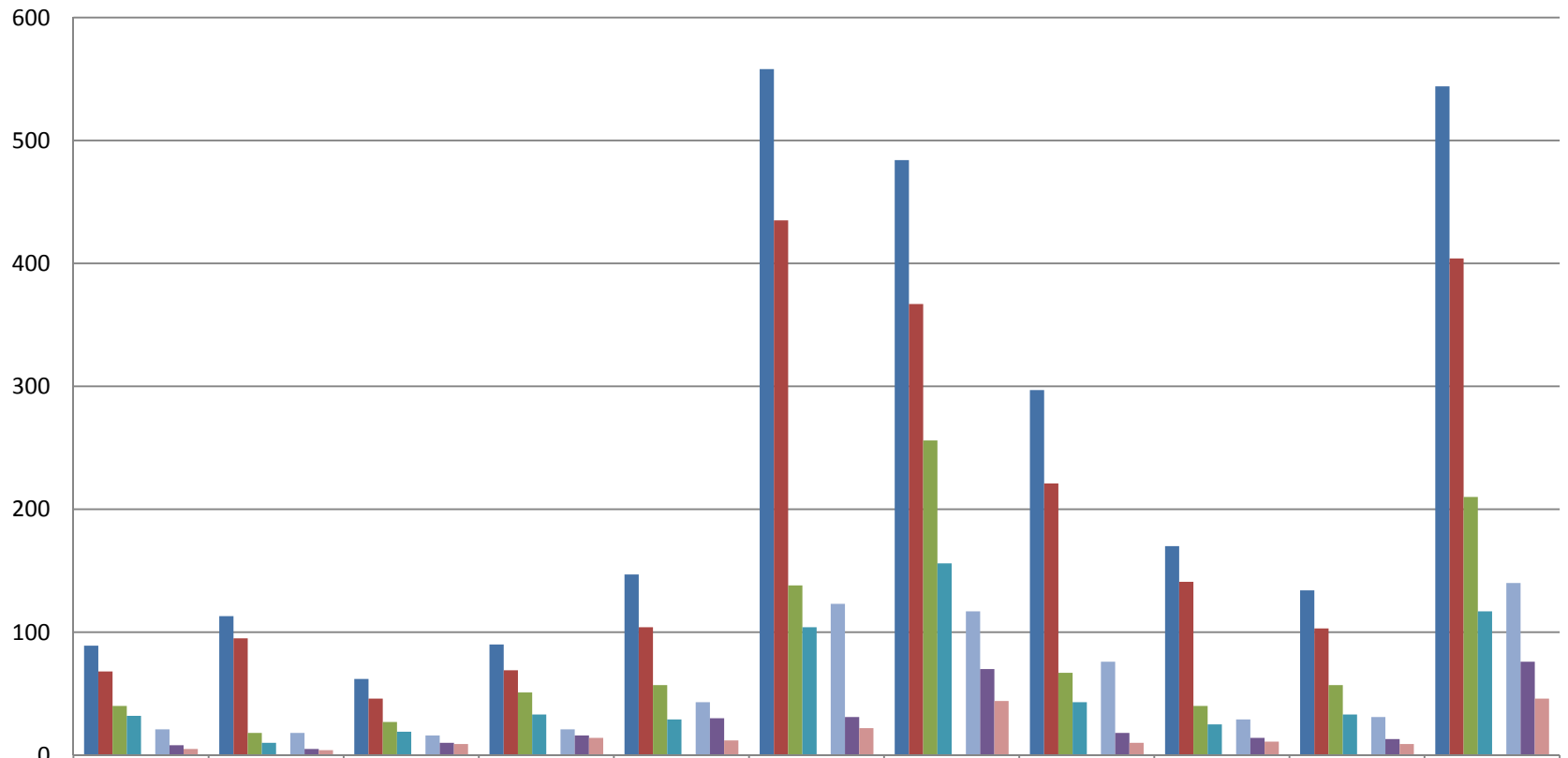
	E11	E14	E16	E223	E3
Day Dispatches	62	43	60	59	123
Day Enroutes	35	9	44	8	18
Day Onscenes	34	8	30	7	25
Night Dispatches	22	15	20	15	61
Night Enroutes	15	3	18	6	15
Night Onscenes	15	3	30	6	15

Squad Day Vs Night Responses 2007



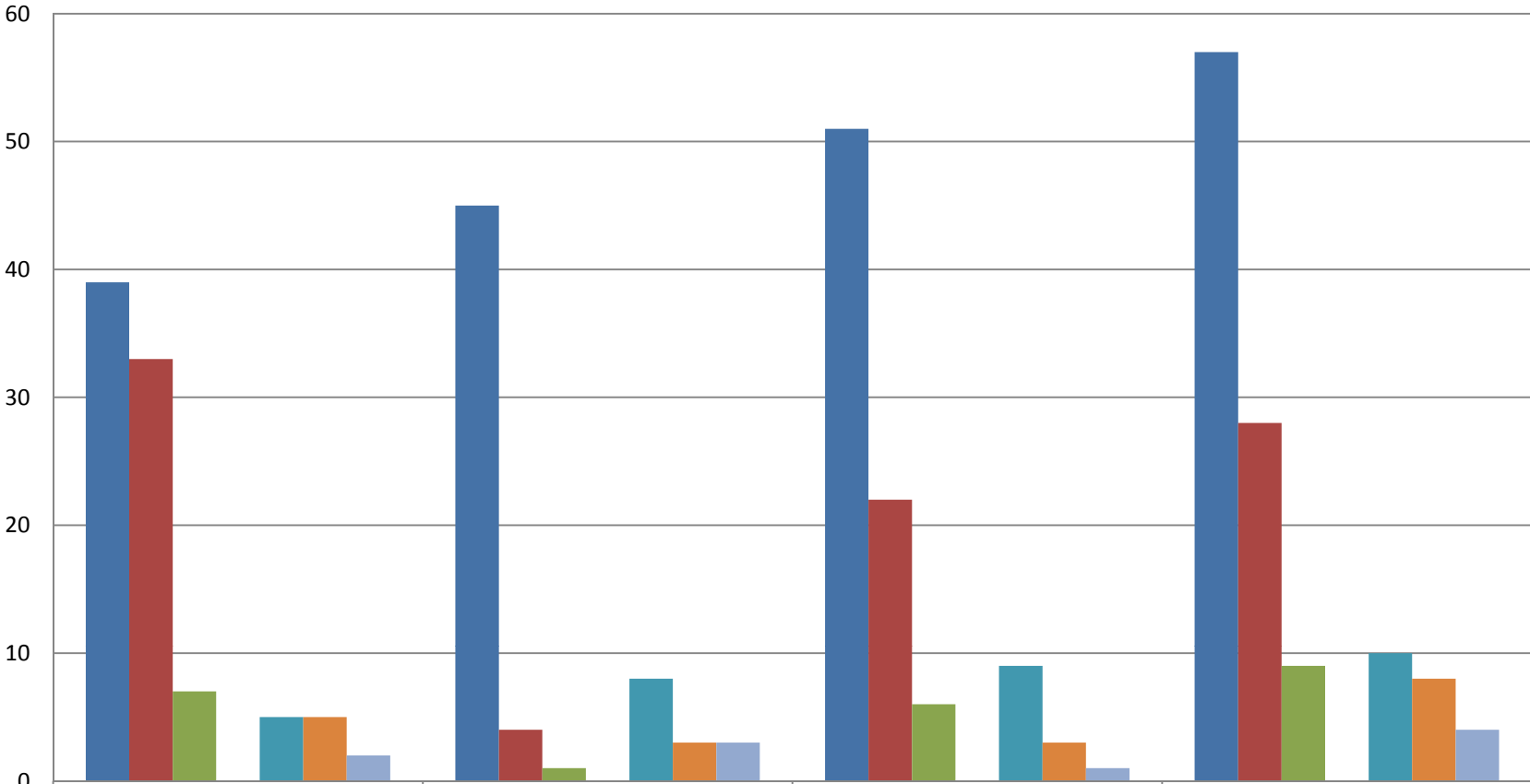
	S13	S19	S2	S21	S24	S25	S3	S44
Dispatches	256	782	267	51	661	369	190	82
DayDisp	189	619	197	43	502	285	128	62
DayER	8	72	42	10	282	112	40	32
DayOS	6	47	32	7	199	79	32	21
NightDisp	67	163	70	8	159	84	62	20
NightER	1	23	18	0	64	45	30	6
NightOS	1	14	11	0	40	33	25	1

Patrol Day Vs Night Reponses 2007



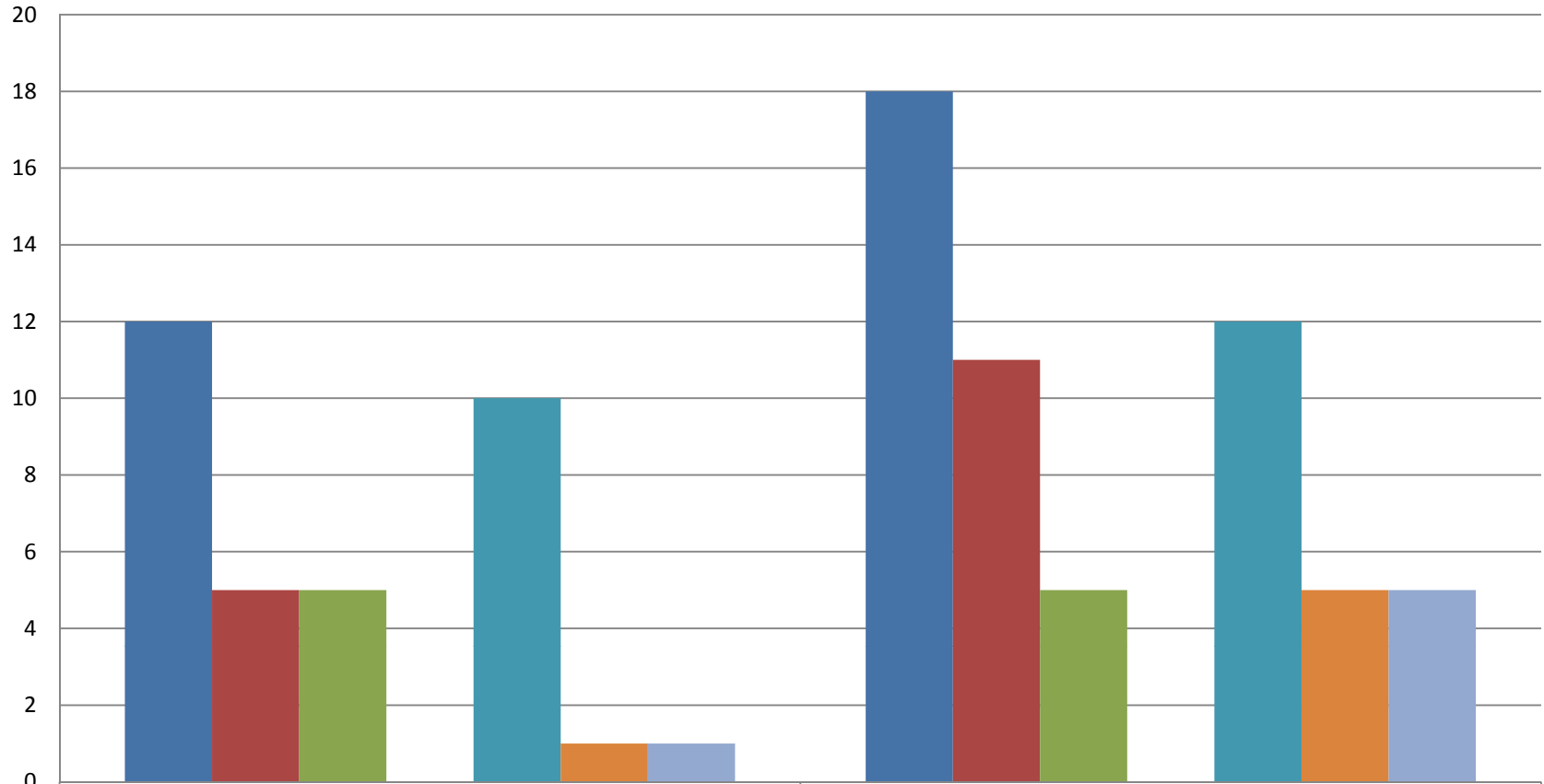
	P11	P23	P14	P16	P18	P21	P26	P30	P32	P40	P7
Dispatched	89	113	62	90	147	558	484	297	170	134	544
DayDisp	68	95	46	69	104	435	367	221	141	103	404
Enroute	40	18	27	51	57	138	256	67	40	57	210
Onscene	32	10	19	33	29	104	156	43	25	33	117
NightDisp	21	18	16	21	43	123	117	76	29	31	140
Enroute	8	5	10	16	30	31	70	18	14	13	76
Onscene	5	4	9	14	12	22	44	10	11	9	46

Water Tender Day Vs Night Responses 2007



	W16	W10	W40	W7
DayDisp	39	45	51	57
DayER	33	4	22	28
DayOS	7	1	6	9
NightDisp	5	8	9	10
NightER	5	3	3	8
NightOS	2	3	1	4

AirUtility Day Vs Night Responses 2007



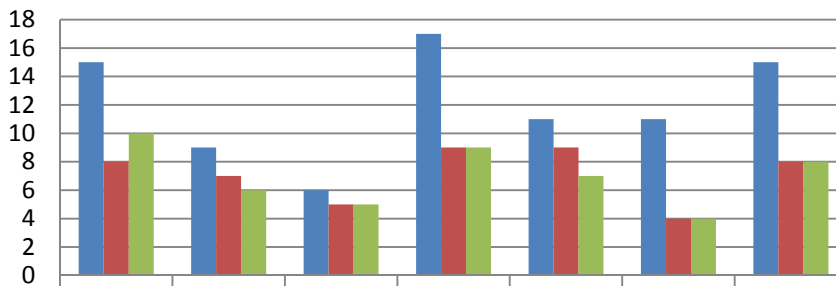
	A2	A30
■ DayDisp	12	18
■ DayER	5	11
■ DayOS	5	5
■		
■ NightDisp	10	12
■ NightER	1	5
■ NightOS	1	5

2007 Day of Week Responses

- Individual Graphs per unit depicting calls Dispatched, Enroute and Onscene by Day of Week

E11	Dispatched	Enroutes	Onscenes
Sun	15	8	10
Mon	9	7	6
Tue	6	5	5
Wed	17	9	9
Thu	11	9	7
Fri	11	4	4
Sat	15	8	8

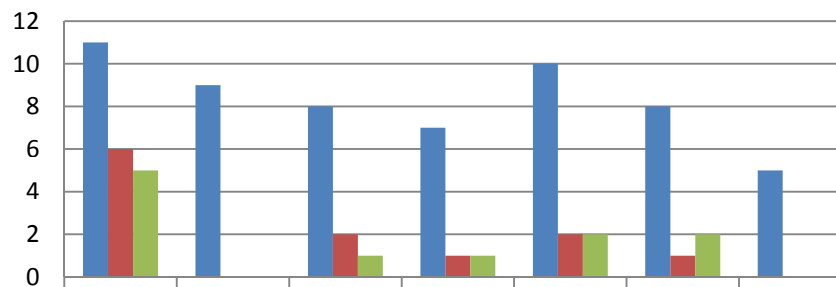
E11 Day of Week



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Dispatched	15	9	6	17	11	11	15
Enroutes	8	7	5	9	9	4	8
Onscenes	10	6	5	9	7	4	8

E14	Dispatched	Enroutes	Onscenes
Sun	11	6	5
Mon	9	0	0
Tue	8	2	1
Wed	7	1	1
Thu	10	2	2
Fri	8	1	2
Sat	5	0	0

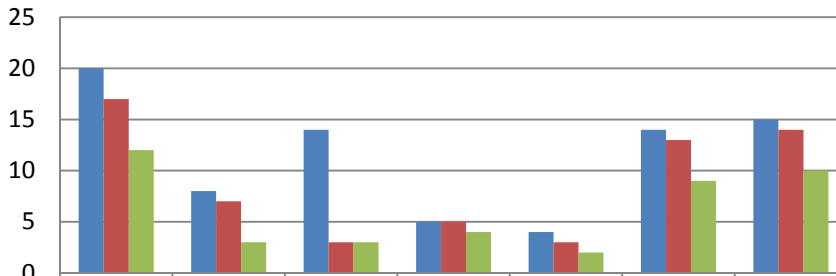
E14 Day of Week



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Dispatched	11	9	8	7	10	8	5
Enroutes	6	0	2	1	2	1	0
Onscenes	5	0	1	1	2	2	0

E16	Dispatched	Enroutes	Onscenes
Sun	20	17	12
Mon	8	7	3
Tue	14	3	3
Wed	5	5	4
Thu	4	3	2
Fri	14	13	9
Sat	15	14	10

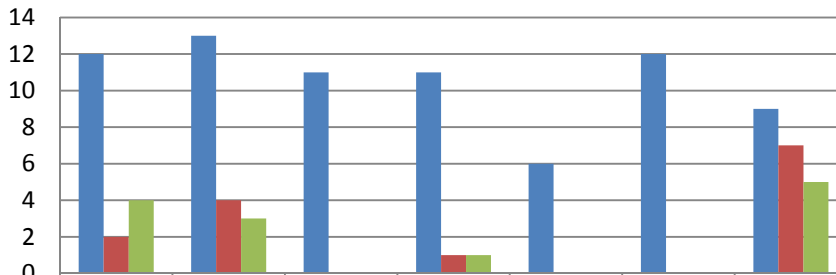
E16



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Dispatched	20	8	14	5	4	14	15
Enroutes	17	7	3	5	3	13	14
Onscenes	12	3	3	4	2	9	10

E223	Dispatched	Enroutes	Onscenes
Sun	12	2	4
Mon	13	4	3
Tue	11	0	0
Wed	11	1	1
Thu	6	0	0
Fri	12	0	0
Sat	9	7	5

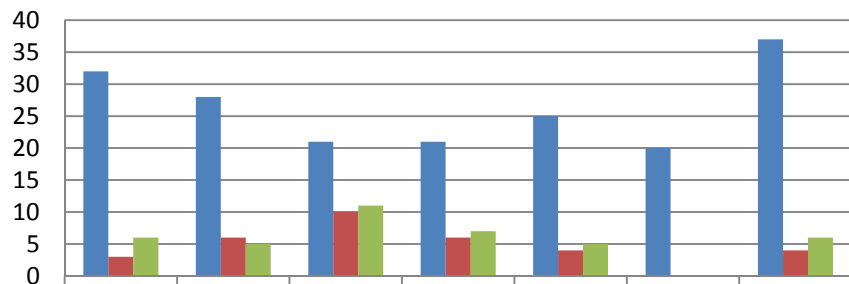
E223 Day Of Week



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Dispatched	12	13	11	11	6	12	9
Enroutes	2	4	0	1	0	0	7
Onscenes	4	3	0	1	0	0	5

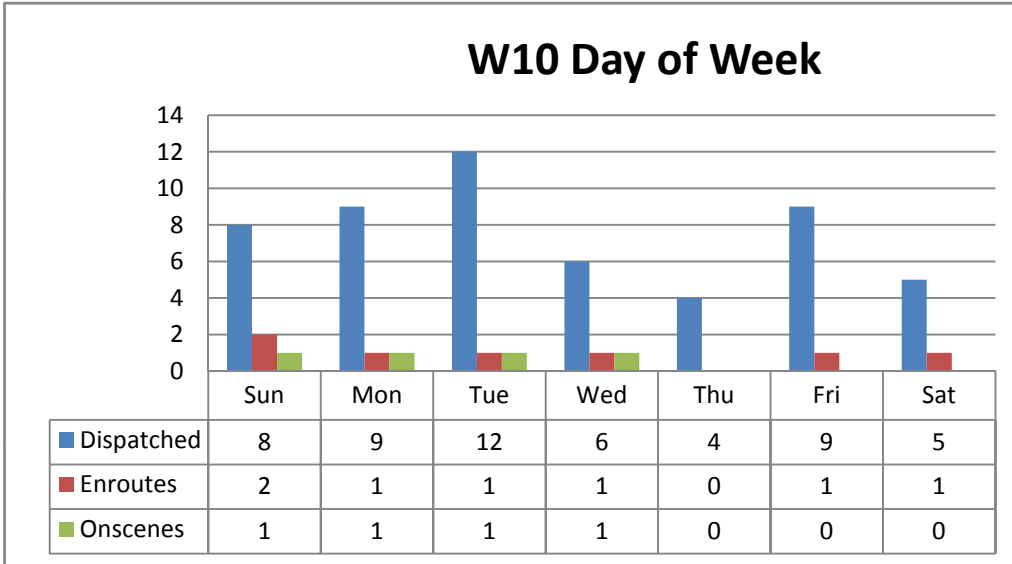
E3	Dispatched	Enroutes	Onscenes
Sun	32	3	6
Mon	28	6	5
Tue	21	10	11
Wed	21	6	7
Thu	25	4	5
Fri	20	0	0
Sat	37	4	6

E3 Day of Week

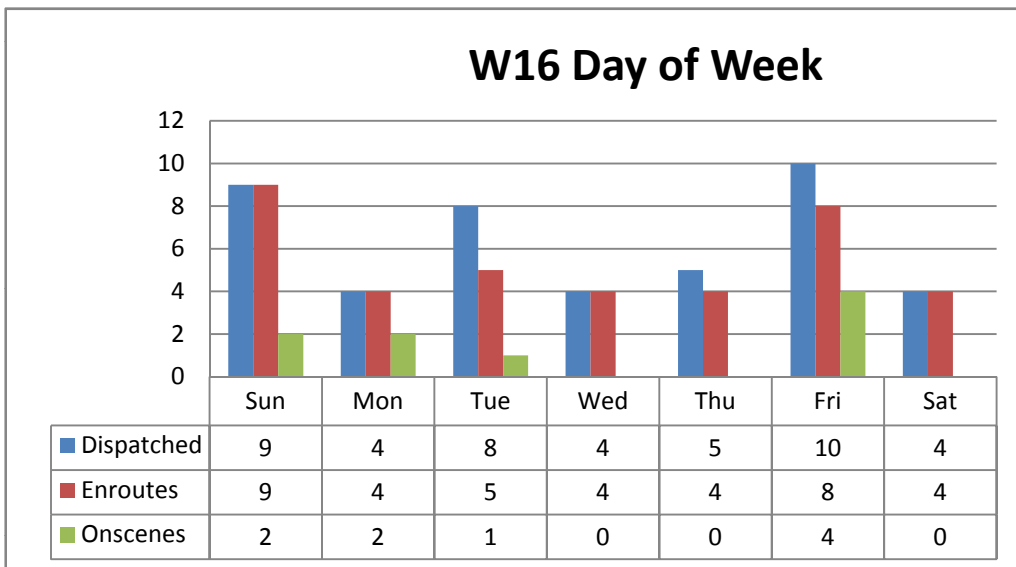


	Sun	Mon	Tue	Wed	Thu	Fri	Sat
■ Dispatched	32	28	21	21	25	20	37
■ Enroutes	3	6	10	6	4	0	4
■ Onscenes	6	5	11	7	5	0	6

	W10		
Sun	8	2	1
Mon	9	1	1
Tue	12	1	1
Wed	6	1	1
Thu	4	0	0
Fri	9	1	0
Sat	5	1	0

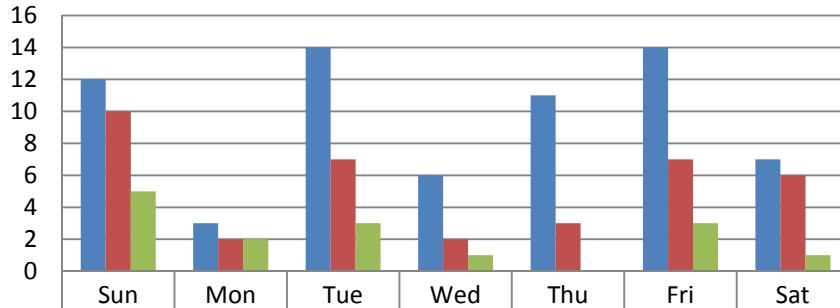


W16	Dispatched	Enroutes	Onscenes
Sun	9	9	2
Mon	4	4	2
Tue	8	5	1
Wed	4	4	0
Thu	5	4	0
Fri	10	8	4
Sat	4	4	0



	Dispatched	Enroutes	Onscenes
W40			
Sun	13	6	3
Mon	3	2	3
Tue	13	3	1
Wed	6	1	0
Thu	10	6	0
Fri	10	5	3
Sat	5	3	1

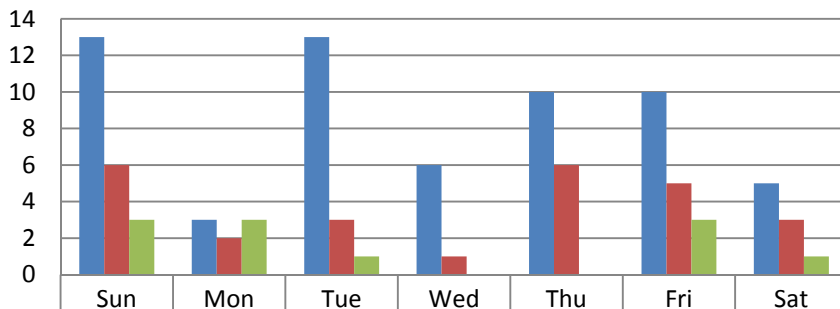
W7 Day of Week



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Dispatched	12	3	14	6	11	14	7
Enroutes	10	2	7	2	3	7	6
Onscenes	5	2	3	1	0	3	1

	Dispatched	Enroutes	Onscenes
W7			
Sun	12	10	5
Mon	3	2	2
Tue	14	7	3
Wed	6	2	1
Thu	11	3	0
Fri	14	7	3
Sat	7	6	1

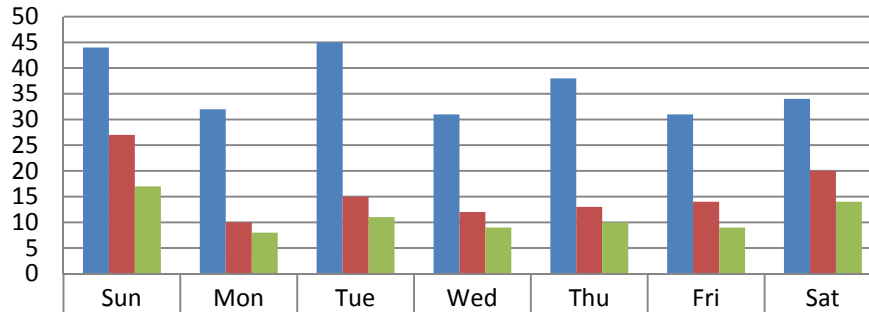
W40 Day of Week



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Dispatched	13	3	13	6	10	10	5
Enroutes	6	2	3	1	6	5	3
Onscenes	3	3	1	0	0	3	1

P10	Dispatches	Enroutes	Onscenes
Sun	44	27	17
Mon	32	10	8
Tue	45	15	11
Wed	31	12	9
Thu	38	13	10
Fri	31	14	9
Sat	34	20	14

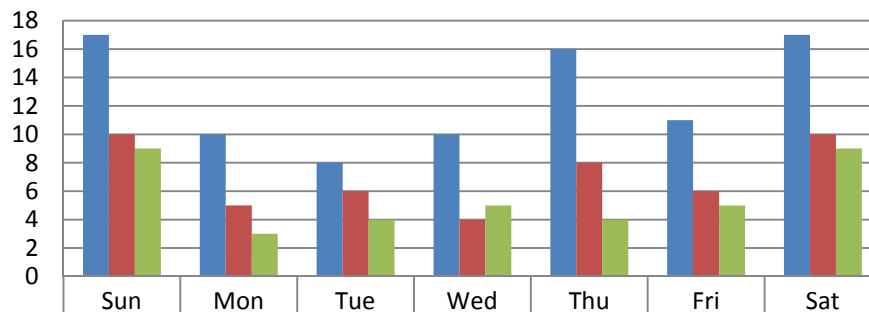
P10 Day of Week



	Sun	Mon	Tue	Wed	Thu	Fri	Sat
■ Dispatches	44	32	45	31	38	31	34
■ Enroutes	27	10	15	12	13	14	20
■ Onscenes	17	8	11	9	10	9	14

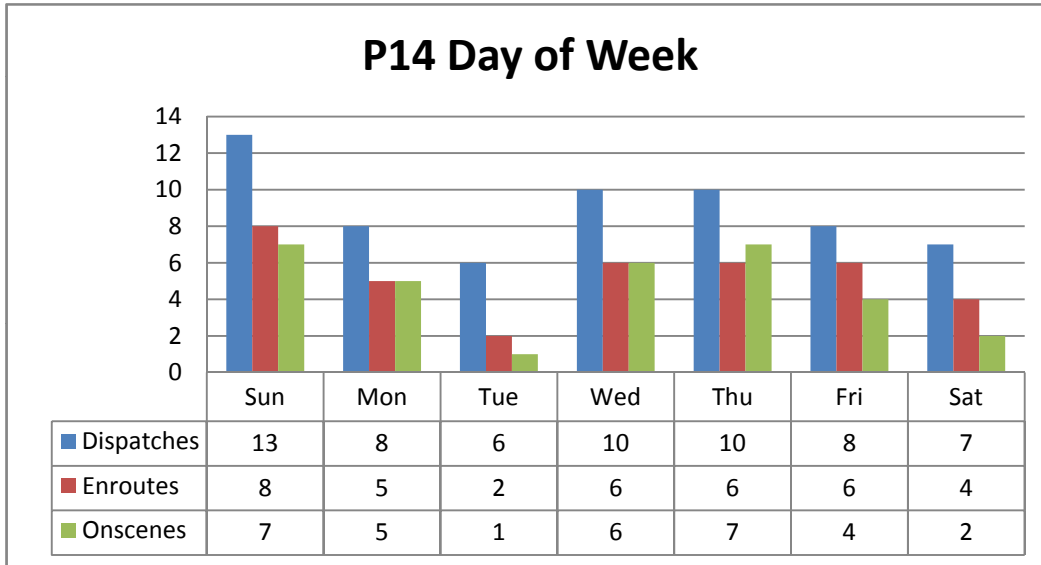
P11	Dispatches	Enroutes	Onscenes
Sun	17	10	9
Mon	10	5	3
Tue	8	6	4
Wed	10	4	5
Thu	16	8	4
Fri	11	6	5
Sat	17	10	9

P11 Day of Week

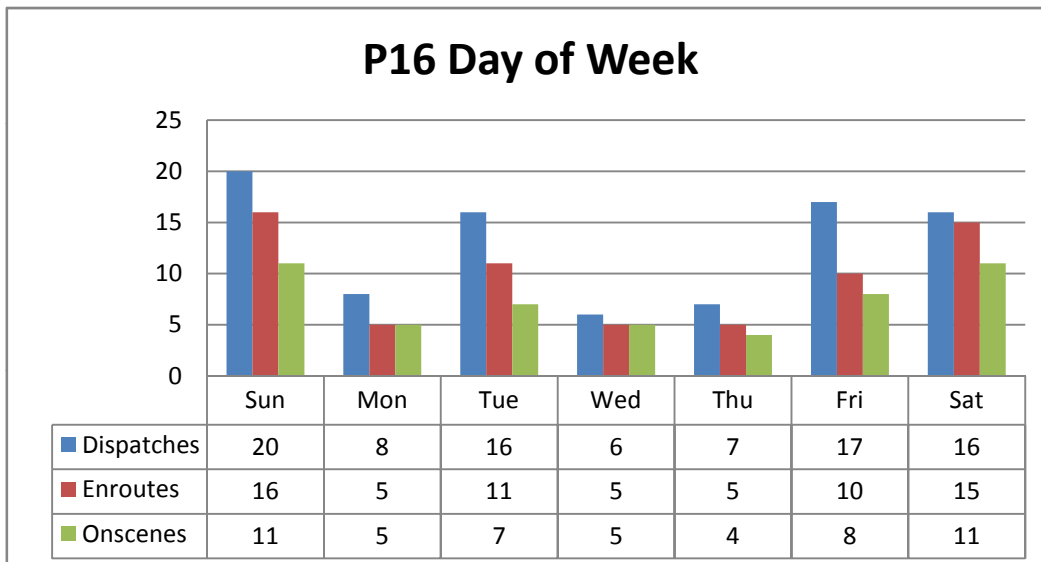


	Sun	Mon	Tue	Wed	Thu	Fri	Sat
■ Dispatches	17	10	8	10	16	11	17
■ Enroutes	10	5	6	4	8	6	10
■ Onscenes	9	3	4	5	4	5	9

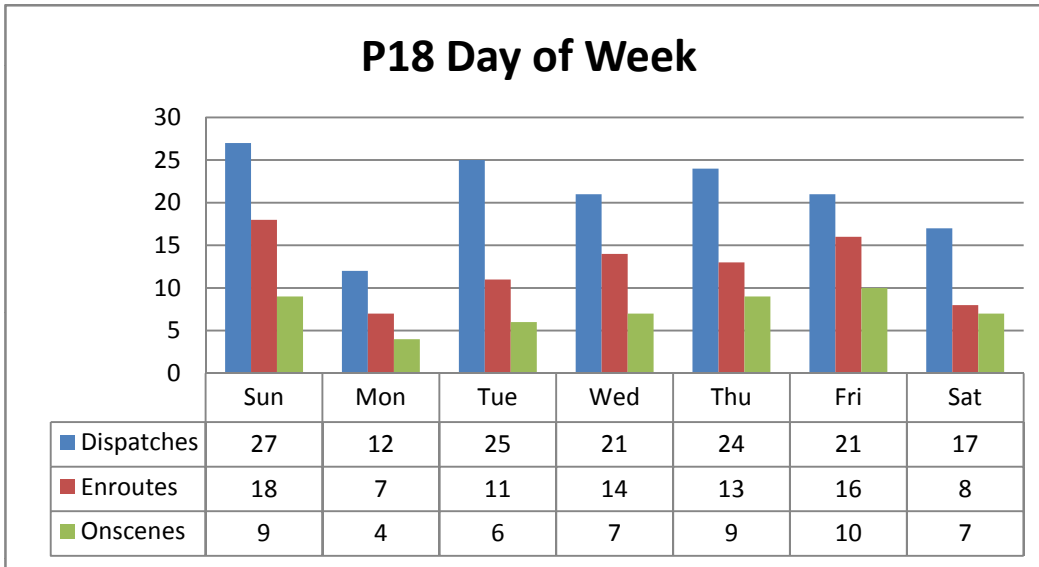
P14	Dispatches	Enroutes	Onscenes
Sun	13	8	7
Mon	8	5	5
Tue	6	2	1
Wed	10	6	6
Thu	10	6	7
Fri	8	6	4
Sat	7	4	2



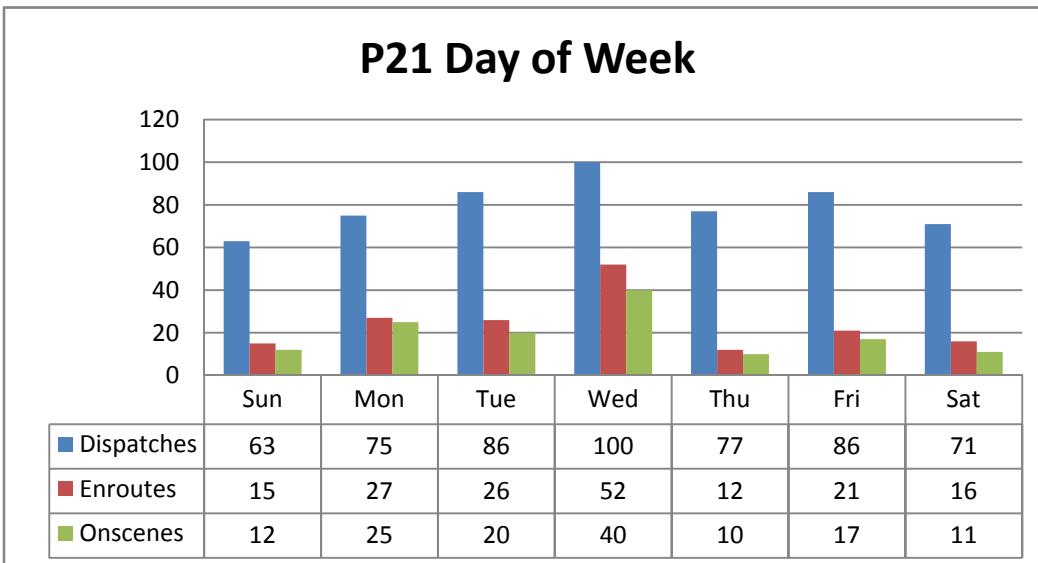
P16	Dispatches	Enroutes	Onscenes
Sun	20	16	11
Mon	8	5	5
Tue	16	11	7
Wed	6	5	5
Thu	7	5	4
Fri	17	10	8
Sat	16	15	11



P18	Dispatches	Enroutes	Onscenes
Sun	27	18	9
Mon	12	7	4
Tue	25	11	6
Wed	21	14	7
Thu	24	13	9
Fri	21	16	10
Sat	17	8	7

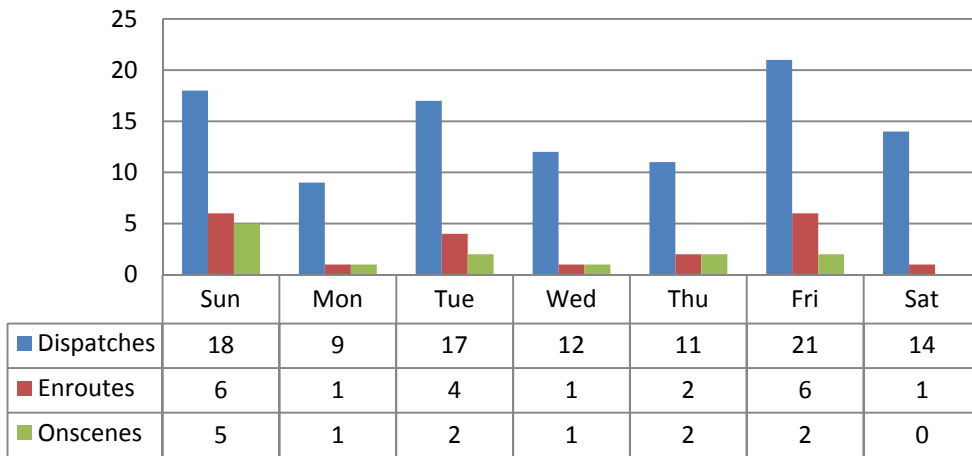


P21	Dispatches	Enroutes	Onscenes
Sun	63	15	12
Mon	75	27	25
Tue	86	26	20
Wed	100	52	40
Thu	77	12	10
Fri	86	21	17
Sat	71	16	11



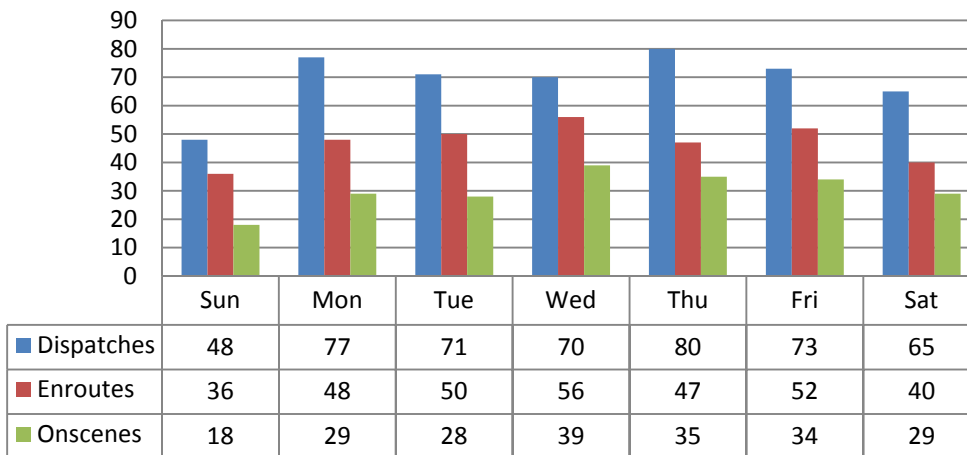
P23	Dispatches	Enroutes	Onscenes
Sun	18	6	5
Mon	9	1	1
Tue	17	4	2
Wed	12	1	1
Thu	11	2	2
Fri	21	6	2
Sat	14	1	0

P23 Day of Week

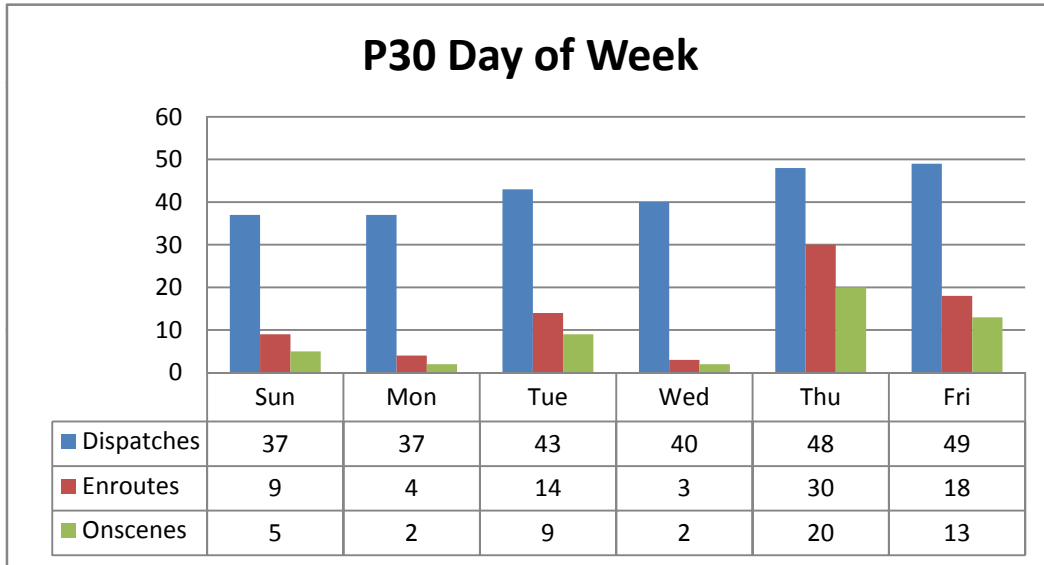


P26	Dispatches	Enroutes	Onscenes
Sun	48	36	18
Mon	77	48	29
Tue	71	50	28
Wed	70	56	39
Thu	80	47	35
Fri	73	52	34
Sat	65	40	29

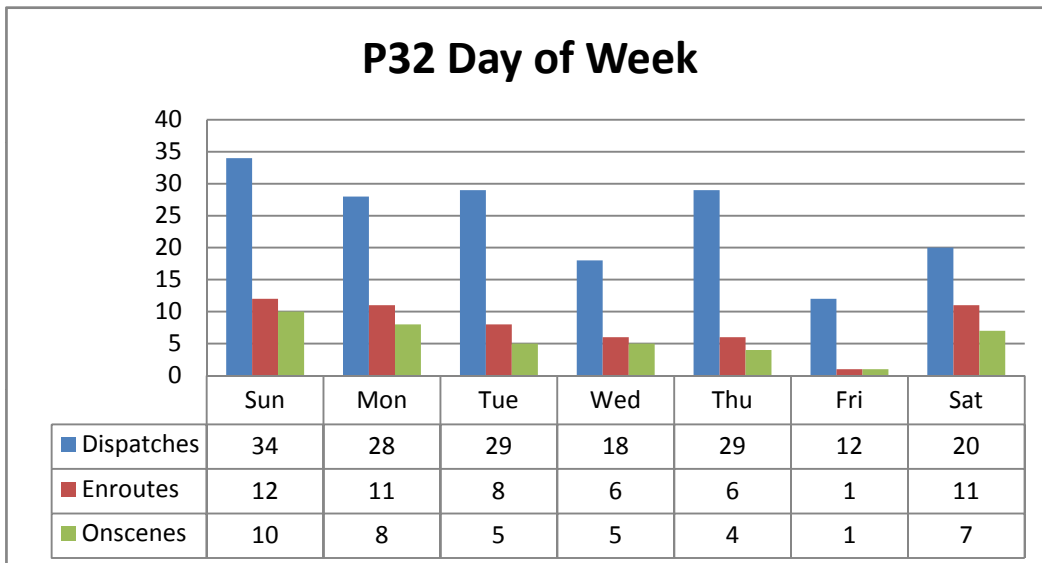
P26 Day of Week



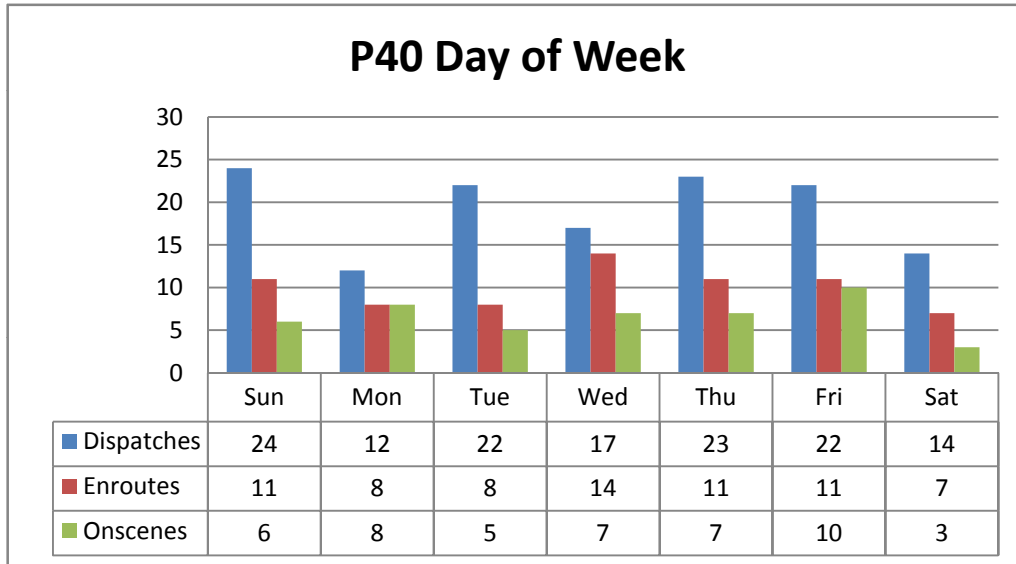
P30	Dispatches	Enroutes	Onscenes
Sun	37	9	5
Mon	37	4	2
Tue	43	14	9
Wed	40	3	2
Thu	48	30	20
Fri	49	18	13
Sat	43	7	6



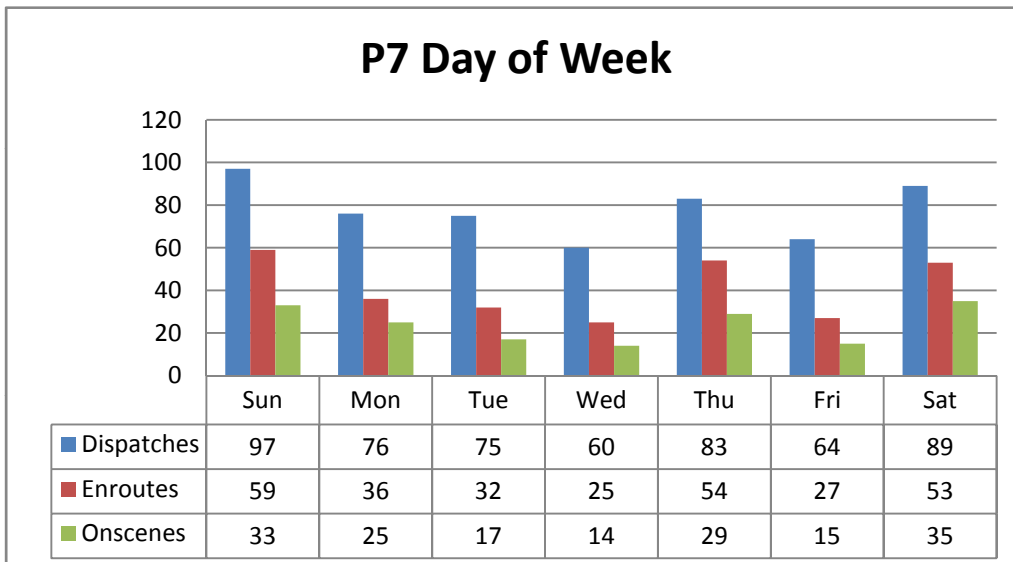
P32	Dispatches	Enroutes	Onscenes
Sun	34	12	10
Mon	28	11	8
Tue	29	8	5
Wed	18	6	5
Thu	29	6	4
Fri	12	1	1
Sat	20	11	7



P40	Dispatches	Enroutes	Onscenes
Sun	24	11	6
Mon	12	8	8
Tue	22	8	5
Wed	17	14	7
Thu	23	11	7
Fri	22	11	10
Sat	14	7	3

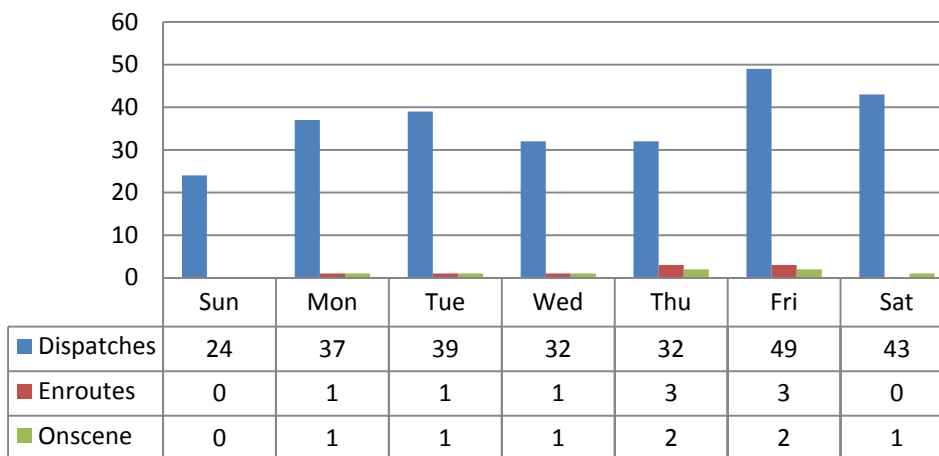


P7	Dispatches	Enroutes	Onscenes
Sun	97	59	33
Mon	76	36	25
Tue	75	32	17
Wed	60	25	14
Thu	83	54	29
Fri	64	27	15
Sat	89	53	35



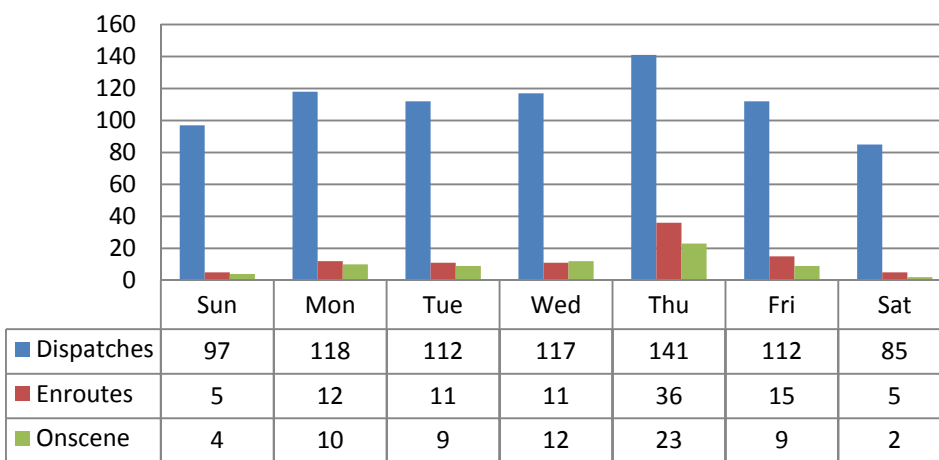
S13	Dispatches	Enroutes	Oncene
Sun	24	0	0
Mon	37	1	1
Tue	39	1	1
Wed	32	1	1
Thu	32	3	2
Fri	49	3	2
Sat	43	0	1

S13 Day of Week

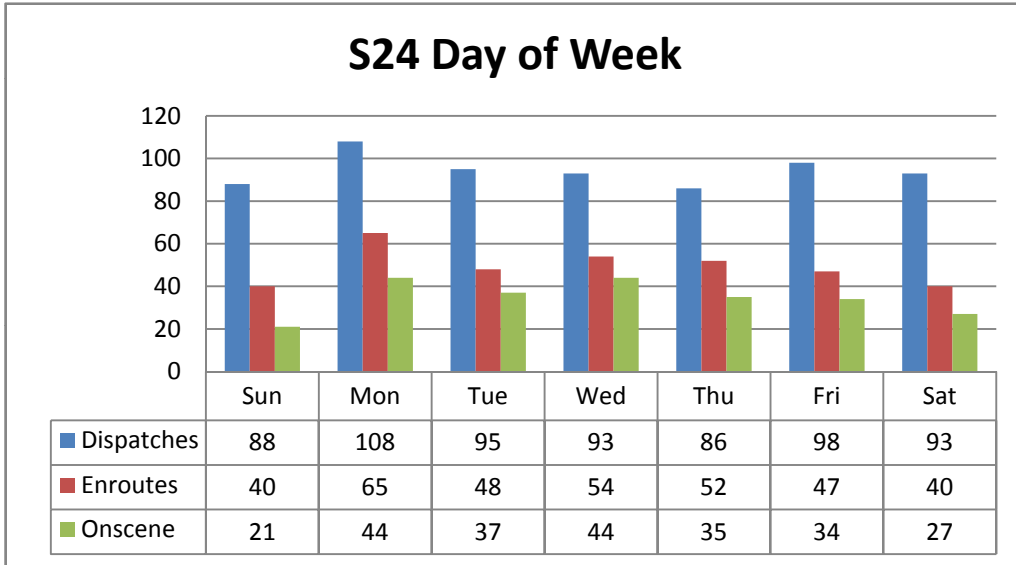


S19	Dispatches	Enroutes	Oncene
Sun	97	5	4
Mon	118	12	10
Tue	112	11	9
Wed	117	11	12
Thu	141	36	23
Fri	112	15	9
Sat	85	5	2

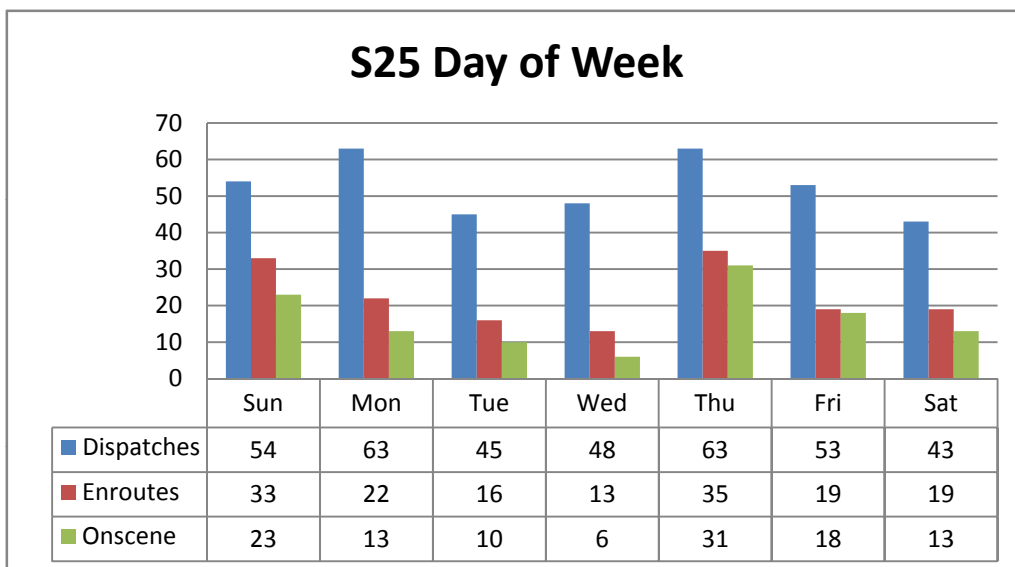
S19 Day of Week



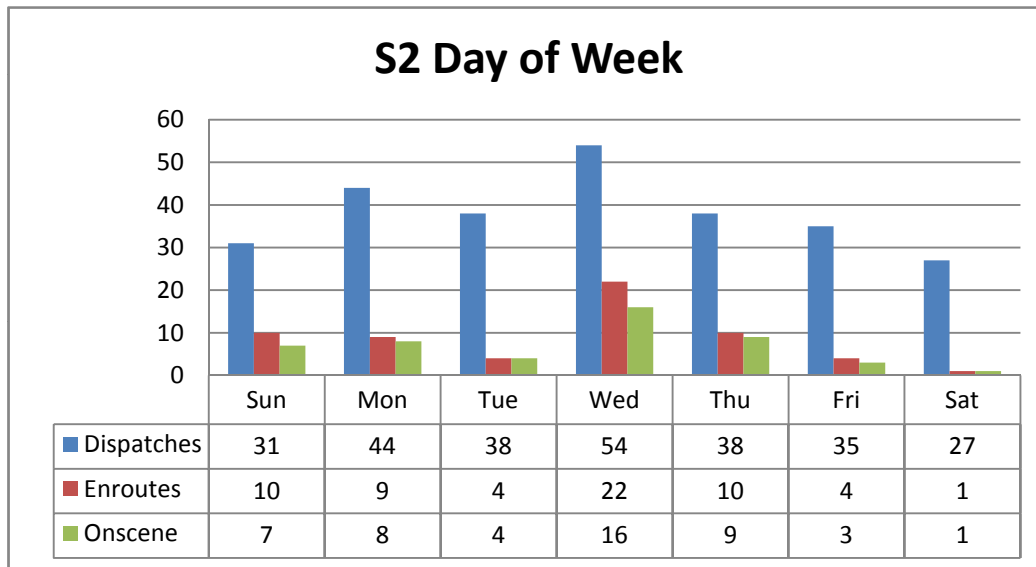
S24	Dispatches	Enroutes	Onscene
Sun	88	40	21
Mon	108	65	44
Tue	95	48	37
Wed	93	54	44
Thu	86	52	35
Fri	98	47	34
Sat	93	40	27



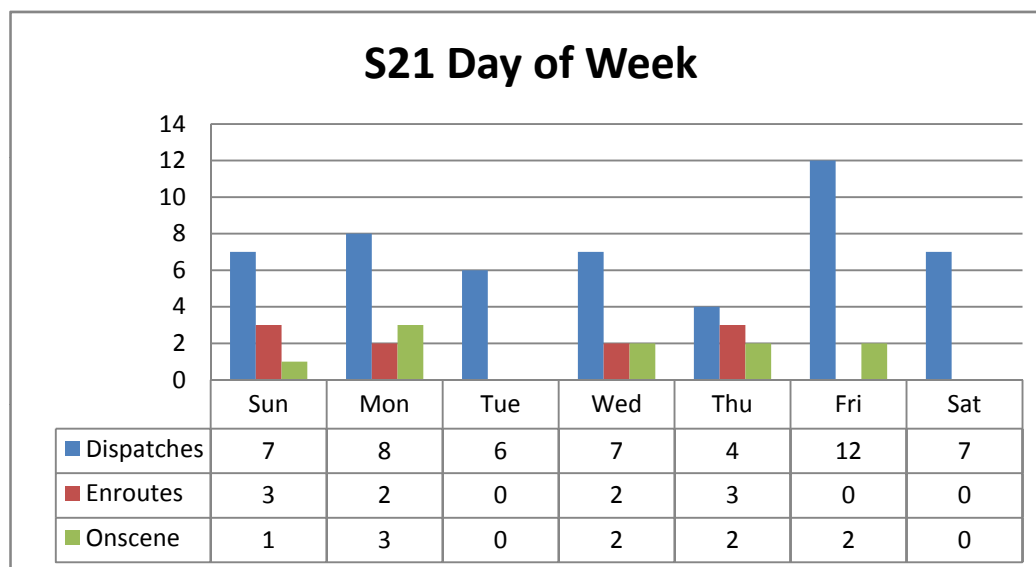
S25	Dispatches	Enroutes	Onscene
Sun	54	33	23
Mon	63	22	13
Tue	45	16	10
Wed	48	13	6
Thu	63	35	31
Fri	53	19	18
Sat	43	19	13



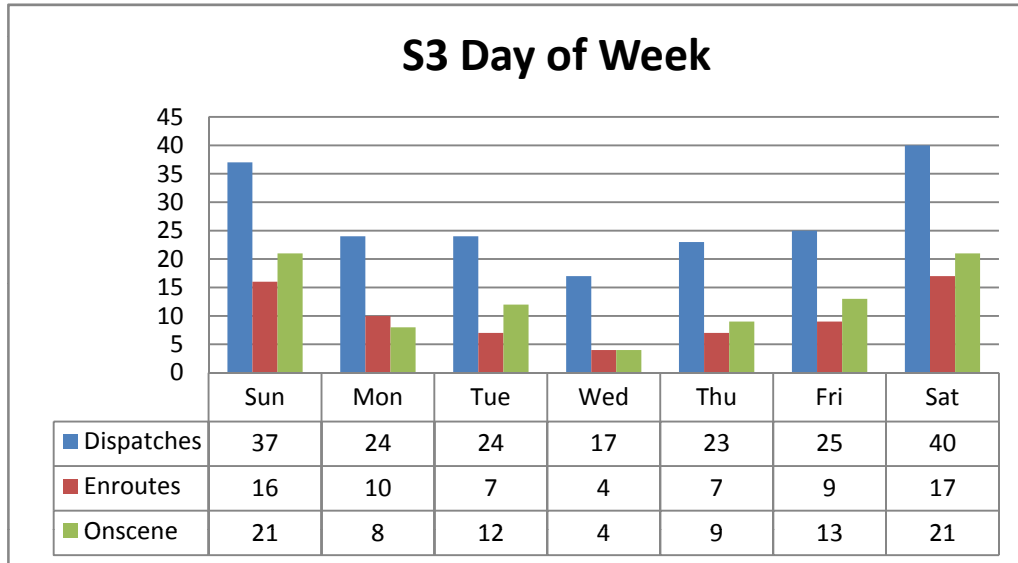
S2	Dispatches	Enroutes	Onscene
Sun	31	10	7
Mon	44	9	8
Tue	38	4	4
Wed	54	22	16
Thu	38	10	9
Fri	35	4	3
Sat	27	1	1



S21	Dispatches	Enroutes	Onscene
Sun	7	3	1
Mon	8	2	3
Tue	6	0	0
Wed	7	2	2
Thu	4	3	2
Fri	12	0	2
Sat	7	0	0



S3	Dispatches	Enroutes	Onscene
Sun	37	16	21
Mon	24	10	8
Tue	24	7	12
Wed	17	4	4
Thu	23	7	9
Fri	25	9	13
Sat	40	17	21



S44	Dispatches	Enroutes	Onscene
Sun	14	4	2
Mon	14	6	2
Tue	8	6	3
Wed	10	6	3
Thu	13	7	6
Fri	10	5	5
Sat	13	4	3

