The equipment and training limitations also make their ability to function on complicated vehicle rescues more difficult.

The lack of training in water rescue puts personnel at extreme risk during flood emergencies when they are dispatched in Rock Creek or along Beach Drive, to which they respond with a small rubber boat.

Rescue Squad 3 – This unit is located in Anacostia. It is the designated collapse response company.

Rescue Squad 3 is running a 1985 rescue squad that is in the worst condition of any of the squad companies. The body is severely tilted to one side and in very poor shape. This unit needs to be replaced, not rehabilitated. The current, unsatisfactory replacement plan is that when Rescue 2 gets a rehabilitated rescue vehicle, Rescue 3 will be the reserve vehicle being used by Rescue 2, which is also in poor condition.

The cave-in unit has a second hand converted step van procured from a utility company. It is in fair to poor condition and has high mileage. The unit cannot hold the required amount of equipment necessary to support a collapse response. Equipment is jammed into the vehicle making access to any single piece of equipment difficult or impossible without unloading all the other equipment, slowing a response. This unit needs to be replaced with a pod-style, lift-back style or large enclosed trailer support unit capable of hauling technical rescue equipment as soon as it is feasible.

Like other squads, vehicle extrication tools are old and approaching the end of their service lives. There is virtually no preventive maintenance and no schedule for the routine replacement of these items. The air bags for lifting heavy objects off of people are at the end of their service lives. The unit has virtually no electrical or pneumatic tools to back up the hydraulic rescue tools or to facilitate to the rescue of persons from modern vehicles or machinery. Rescue 3 is short on wood cribbing to stabilize vehicles.

Due to procurement of new equipment through grants, the company is building up its supply of technical equipment. However, due to limitation of the apparatus, they have

no quick means of responding to a scene with any of this equipment. They need to build up their inventory further to be on par with the rescue capability of surrounding jurisdictions. They too have virtually no lighting for night operations.

Hazmat Unit – The Hazmat Unit uses a 1991 Emergency One Hush Rescue unit that has been developing problems with its frame and body, and will be in need of rehabilitation soon. The unit does not have enough space to carry a full complement of hazardous material response equipment.

The Hazmat unit is staffed by at least five (5) Level 3 (Hazmat Technician) personnel, of which at least one must be a Level 4 (Hazmat Specialist), which requires attending Hazmat training outside the department. The Hazmat team is backed up by the rescue squads. The department needs more specialist (Level 4) personnel assigned to the unit on each shift.

The team's equipment for monitoring and diagnosing problems during Hazmat response seems adequate, and the team has the advantage of being able to call upon some federal resources in the area.

The equipment available for hazardous materials incident mitigation is in need of attention. The unit only has access to six encapsulated level-A entry suits (the "space" suits used to enter the most hazardous atmospheres). The ability of the unit to actually mitigate a prolonged, hazardous incident is hampered by a lack of this equipment. Any incident aside from a chemical spill containment operation would likely require the assistance of mutual aid resources.

Fireboats

The primary mission of the fireboats is to provide water rescue, EMS, and fire protection on the Potomac and Anacostia Rivers. They also provide pollution control for oil or chemical spills on the rivers and assistance to watercraft and other vessels. These units also provide the only protection for the three large tour vessels on the water, (the Spirit Ships and the Oddessy, which can hold up to 2,000 passengers at any given time),

numerous other small tour boats, as well as rescue and firefighting should another plane crash occur in the Potomac River. The fireboats fill a variety of roles and there is no substitute when they are needed. This company is a busy marine unit compared to other cities and their unique service is needed.

The fireboats are in good condition particularly compared to other city resources. Fireboat 1, the *John Glenn, Jr.* is a traditional city fireboat that was just recently rehabilitated by the U.S. Coast Guard and DC fire department personnel at a Baltimore shipyard. The *John Glenn, Jr.* is staffed by a crew of three: a U.S. Coast Guard certified Marine Pilot, a U.S. Coast Guard certified Marine Engineer, and a Fire Officer/Deckhand. The *John Glenn, Jr.*'s staffing was cut from five people several years ago when the fire department was unable to continue funding a SCUBA dive rescue team. It is an all weather unit that is capable of supplying 7,000-8,000 gallons of water per minute for firefighting operations and can serve as an on water command post for water or bridge incidents. The *John Glenn, Jr.* is also used to break ice during cold winters to facilitate the transport of fuel to Andrews Air Force Base and the Stuart fuel depot that supplies Washington D.C. with fuel for power generation. Although in many jurisdictions it is the responsibility of the United States Coast Guard to break river ice, the DCFEMS has assumed this necessary task.

Fireboat 2 is a two year old Boston Whaler with a 750 gallon per minute water pump and twin outboard motors. Fireboat 2 is in very good condition, but lacks advanced electronics such as radar and GPS. These relatively inexpensive items ($2,500) were cut from the unit when it was purchased due to funding limitations. Fireboat 2 is staffed with two people, a Marine Operator and a Deckhand/Rescue Swimmer.

Fireboat 3 was purchased in 1984 and was the first fireboat built by the Boston Whaler company. It is currently dry-docked for service by the fireboat crews. When the boat is repaired, it will be used as a back-up boat or as an extra unit when large numbers of watercraft are on the river, such as the Fourth of July. It also has a 750-gallon per minute water pump.

The following concerns have been identified:

- Staffing of the fireboats appears adequate with a daily complement of five people per shift, however, several vacancies have not been recently filled. We do not recommend doing away with the Fireboat unit, but it may be possible to staff it differently (E.g.: with a pilot and engineer full-time supplemented by a land company, which is how the departments from New York and Tacoma operate). This requires further research, as there are many options, including leaving the unit as it is currently.

- Personnel on detail to the fireboats to temporarily fill vacancies are not required to have any training in water operations, nor are they required to be able to swim. This is dangerous and inadequate. There is no provision for the establishment of a personnel pool with training who could be detailed to the fireboats. Any time untrained personnel are placed on a detail to the boats, the effective and safe operations of the crews are reduced because these personnel will not be able to operate the firepumps, pilot the boats, or effect rescues.

- No cross-training with land units occurs. The fireboat crews could be used to train land units for water rescue. The fireboats are not used to train rescue squad crews in water rescue, yet the rescue squad crews are responsible for all inland water rescue and the fireboat crews are not (a rescue squad would be called for someone drowning in the Tidal Basin, for example, even though the fireboat station is much closer). The building in which the fireboat crew is stationed is Police Department-owned and has a classroom that would be appropriate for this training.

- The fireboat crews have no means to respond to assist rescue squads with complicated water rescues. The pick-up truck assigned to the fireboats is not considered a response vehicle and is not equipped with lights or a siren. The truck is old and unreliable. It should be replaced with a lightweight vehicle that can be used to respond to all water rescues in the city, and provisions for the response of the fireboat crew to inland water rescues should be incorporated into DCFEMS response policies.

- The units have a limited ability to cope with a mass casualty incident on the river. Large flotation devices on each boat are on loan from another rescue agency. The *John Glenn, Jr.* currently provides the only platform to hold multiple victims should a tour ship sink or catch on fire, or a plane crash.

- The shipboard firefighting capabilities of the boats are limited due to lack of protective equipment and limited staffing. The unit's marine firefighting is, in practice, limited to external operations.

- The District of Columbia Metropolitan Police Department Marine Unit responds along with the DCFEMS fireboat on water craft emergencies. Operationally, some duplication of services exists between the fireboats and the police marine units on rescue calls. The MPD Marine Unit is not always staffed. The police boats are often staffed with only one officer, and the police are not trained to provide emergency medical care, nor do they have the capability to fight fires. The Fireboats provide the only marine units with this capability that are staffed around the clock in the city. This is especially critical for water safety during the pleasure boaters' season.

- The Police Department budget includes direct funding from the U.S. Coast Guard for marine operations, estimated at $80,000 per year. The Police have a well-maintained fleet of 11 boats, yet do not provide fire or EMS services and have a skeleton staff during all but special events. The fireboats, on the other hand, receive none of the funding, and have to rehabilitate and scrounge used parts for motors and equipment while the Police force is well stocked. The unit does not directly recover any costs from its pollution control and cleanup operations or for any other services.

- Only a few of the Fireboat personnel are trained as Emergency Medical Technicians, and none are Paramedics. All personnel should be trained EMTs and the department should consider staffing a paramedic to enhance the ability to provide lifesaving emergency care to victims on the water since emergency

care will be delayed while a patient is transported to the shore.

- The personnel on these units are not trained nor equipped to safely perform ice rescues despite freezing conditions that occur on the Potomac.

Foam Units

The foam units are primarily used to provide standby protection for the President and Vice-President during helicopter flights. They also provide a valuable resource for the Hazmat team. These units seem to be in good condition and are used effectively. Some repairs to the foam units have been delayed due to procurement problems, discussed elsewhere.

Metro and Rail Operations

The department is in the process of updating its Metro operating procedures. Sergeants are providing in-station training to companies for metro operations.

The ability of the department to conduct a safe and effective operation on a large scale metro train incident is hampered by the lack of up-to-date rescue equipment on the rescue squads, limited access to mass casualty materials and very poor radio communications.

CHAPTER 7 – TRAINING

The DCFEMS Training Division is primarily responsible for a) training fire recruits and b) continued training of fire and rescue personnel in basic skills and advanced firefighting tactics. The services provided by the division include:

- Entry level firefighter training.
- Emergency Medical Technician -Basic training and recertification.
- Continuing education and in-service training to firefighters in the Firefighting Division.
- Development of lessons plans for in-station drills conducted by company officers.
- Physical Abilities Testing for the hiring of recruits
- Record keeping for all fire and EMS training for Firefighting division personnel
- Complete accreditation of all training programs to national standards

Other divisions of DCFEMS conduct their own training, including the Fire Prevention Division for inspections. Communication Division for dispatchers, and until recently, the EMS Bureau for EMS training for their own personnel. (Communications and Prevention training needs are discussed in those respective chapters.)

EMS training was recently reassigned to the Fire Training Division to centralize training efforts and eliminate duplication, although it has not been completely assimilated yet. It is envisioned by the Fire Department that the Training Division will become the centralized, coordinating and facilitating agency for all fire and EMS training in the department. The current training staff is widely credited with major improvements in the function of the training academy over the past two years, from what was considered on almost non-functional, poor quality function for several years prior.

Staffing

The Training Division staff currently consists of one Deputy Chief, one Battalion Chief, two Captains, two Lieutenants, two civilian (non-fire department) maintenance workers, and one civilian secretary. The Division's staffing is down from 26 uniformed positions in 1995. Four Sergeants from the Firefighting Division are detailed to the academy to assist with each recruit training class. The current staff are motivated and capable personnel who have accomplished many improvements with limited resources in the past year, notably working towards the accreditation of the training programs to national standards, the completion of updating of lessons plans, and the procurement of new computer equipment from grant programs for record keeping. The assimilation of the four EMS Bureau personnel (an EMS training officer, an EMS instructor, and two paramedics) has not yet been reflected in the organizational chart, and was being sorted out at the time of this initial report. Previously, these EMS Training personnel had limited contact with the Training Division.

Some problem areas:

- Presently the Training Division is still organized to provide its original firefighter training support. The Training Division organization has not been revised to reflect the addition of EMS training. From a management perspective, the training academy appears top heavy, essentially retaining the management staff that was in place prior to the 1995 staffing reduction from 29 personnel to 9 personnel. From an operational perspective, the staffing appears short to accomplish the many tasks of curriculum development, recruit instruction, special operations training, record keeping and routine administration of the facilities. It is a case of too many "chiefs" and too few "workers." The redistribution of duties and assimilation of the EMS Bureau training personnel may serve to smooth this apparent misalignment. There aren't yet firm plans for organization change to expand the division's role as training coordinator for the entire department.

- The Captains and Lieutenants seem bogged down in many mundane tasks such as data entry and maintaining the facility, rather than serving as lead instructors for recruit and other specialized training.
- The training division staff seems to have a negative bias toward the EMS Bureau personnel. This is displayed in several areas: uniformed emergency responders from the EMS bureau are considered and referred to as civilian employees, which implies that they are non-operational and therefore less important than firefighters. EMS supervisors are not respected as fire department officers. Equal rank EMS officers are not considered equal to fire officers. This lack of respect for EMS personnel will interfere with the training division's ability to train EMS personnel. It is too soon to tell if this attitude will change now that the EMS training personnel have been assimilated.

Training Facilities

The training division operates out of a small facility constructed in 1961 and located in Southeast. The facility is totally inadequate and a blemish on the Department.

- The live-firefighting training building has been condemned and inoperable since 1988 and must be replaced with a new facility immediately. Firefighter training requires a live burn simulation building, which allows for fires to be burned and extinguished over and over without damaging the building's structure. It allows firefighters to be trained realistically and safely. This requires a specially designed facility. Presently, this condemned building is being demolished and is only used for advanced special operations structural collapse training (an ironic end use for this structure.) Efforts to replace this simulator have been researched and a new building was designed in 1994, but it has not been funded and is not in the capital improvement budget. More specifically, over $300 was spent on the design of a state-of-the-art facility, but the projected building cost of $2.5 million dollars were never approved.
- The inability to do live burns severely affects the quality of training for new personnel. Live burn training must be given to meet firefighter training

standards. This is presently accomplished by sending D.C. firefighting units to neighboring training facilities such as Alexandria, VA, or using military buildings scheduled to be demolished at U.S. Army Fort Belvoir, VA. This requires transport of the students and large amounts of equipment to distant jurisdictions, and is feasible only when schedules permit their use. The logistics and travel required ultimately reduces training time.

- Live-fire burn training requires safety and supervision in accordance with the NFPA 1403 standard. Specifically designed burn simulators have emergency safety features and access doors necessary for safe operations. Using buildings that are to be demolished increases risk to injuries because the safety features are not incorporated.
- The training needs of DCFEMS have outgrown an outdated facility. The Training Academy is not adequate for centralized training. The Fire Training Division Academy classroom building is too small to train firefighter recruit schools and EMS Bureau personnel. The building has only two working classrooms, which provide a poor learning environment. Additional space is provided by "temporary" trailers that have been turned into supplemental classrooms and office space for Special Operations. EMS Bureau personnel continue to be trained at the Macmillan Drive EMS training unit which, is also inadequate. There is not enough room to accommodate the EMS personnel at the Fire Academy.
- The training facility requires constant work on its plumbing, heating, and air-conditioning, to the point that staff spends a large amount of time in an effort to simply make the building habitable during the hot summers and cold winter months.
- The academy was originally constructed before women were accepted into the fire service. Therefore, all the female locker rooms and facilities were originally added as temporary structures. They are substandard, and possibly in violation of anti-discriminatory statutes.
- The outside area of the facility is in deplorable condition, interfering with the ability of the academy to function safely and properly. There is inadequate parking for students and staff. The facility should be neatly kept as a learning

campus. Instead, the facilities parking area is used for broken apparatus storage. Old and damaged fire vehicles are stored for parts usage to support the fleet maintenance operation. This fire department "junk yard" interferes with parking, overcrowds the outside training area, and is an eyesore. It also sets a very poor example for recruits. The sloppiness of many of the troops, and low morale, is in part a result of the message sent by the poor condition of the capital plant of the department. This message begins with new employees at the DCFEMS training school.

- The Training Division is short of all types of teaching materials, from up-to-date firefighting manuals, to paper for the copy machine, to pencils and notebooks. There are virtually no advanced audio visual materials, just a chalk board and a slide projector. For a fire and EMS training facility to be adequate, there must be suitable classrooms for lecturers and audio-visual capabilities. This is especially important to level the playing field for personnel with various backgrounds. There should be indoor and outdoor class areas suitable for demonstrations and practical applications. The driver training roadway and concrete around the facility is cracking apart, probably as a result of the increased weight of present day fire apparatus. If deteriorated surfacing is not corrected, it will result in further damage until the area is not serviceable and damages fire vehicles.
- The department has been ordered to remove four underground fuel storage tanks at the training facility because of a threat of environmental contamination. Failure to remove the tanks on time or discovery that the tanks have leaked will require additional clean-up expenses. The tank removal will involve excavation and removal of concrete. The tank removal and concrete repair should be coordinated and complete in a timely manner.
- There is not enough locker space for students.
- There is inadequate space for storage of firefighting equipment. One crowded room houses the storage for academy materials, breathing apparatus, and a weight room for physical training.
- The facility provides inadequate security against theft of materials. Advanced equipment such as a video camera has been stolen and not replaced.

- An inoperable water tower takes up needed space on the academy grounds. The estimated costs of demolition of this tower are $65,000. The academy staff is required to maintain the tower because it is in the path of aircraft flying to National Airport.
- There is inadequate storage for assigned fire apparatus, as the engine bay at the training facility has been converted into a training and equipment storage area.

Training Equipment and Apparatus

The training division has a tiller truck and engine assigned for driver training, and several staff vehicles. Here too, the equipment is inadequate.

- The staff vehicles are old and reaching the end of their services lives.
- The tiller truck is useful only for driver training. Its ladder does not meet safety standards and is unable to be used by the staff for ladder operations.
- The difficulty of procurement of equipment for the station has caused a negative impact on the delivery of basic firefighter training. Equipment from the training academy is "borrowed" to re-supply the units in the field. This causes the training academy to teach with out-dated, insufficient, or possible unsafe older tools. This can affect the new recruits' ability to learn because they won't get the opportunity to actually practice with some tools and equipment, and adversely effects the quality of the instruction.
- The academy is in need of lighting equipment to conduct night firefighting training. They are currently not able to conduct this training.

Training Curriculum

The training division is expected to become an academy that can certify training to national standards. It has achieved this accreditation for Firefighter 1 and 2;

Hazardous Materials Level 1 (awareness): 2 (operations), 3 (technician), and 5 (command); and Fire Officer 1.

Many firefighters have obtained advanced EMS training, such as paramedic certifications, from Maryland and Virginia, which meets national certification standards. This is reasonable and considered acceptable by the Department as qualifying a firefighter for EMS duties. However, there is a reluctance to recognize certifications according to national standards obtained elsewhere by EMS Bureau personnel, especially with regard to firefighter training. Many EMS Bureau personnel have firefighter certifications from neighboring jurisdictions, but there is a reluctance to accept that certification without training at the DCFD academy. This serves as a hindrance to transfer of personnel from the EMS to fire divisions, and causes additional costs because personnel are retrained in skills they have already achieved. The difference in D.C. practices from others can be worked out on the job. Among the deficiencies in the curriculum:

- Fire officer training does not include EMS supervisors. The training division also does not provide EMS officers with the supervisor training, similar to that given for Fire Sergeants. Basic Supervisor and management training can be similar regardless of whether EMS or fire personnel are supervised
- The Training Division uses firefighting division officers to develop lesson plans and provide training for in-service and recruit schools classes. All company fire officers are expected to provide in-station training each working shift. Because of these expectations, it is important that fire officers be are trained as instructors. Sergeants receive the national standard fire instructor I course (which teaches instructional skills), but are not required to achieve fire instructor II training (which specifically trains instructors to develop lesson plans). The training division is in the process of working towards the development of Fire Officer 2 and Fire Officer 3 programs, which require a certification as an Instructor Level II.
- Training materials in the stations are not uniform or up-to-date.

- The academy is only able to facilitate a limited amount of chief officer training, and few chiefs are able to attend advanced courses at the National Fire Academy. More command officer courses need to be developed.
- The Training Division has not completed strategic planning with regard to future training needs. The Training Division should develop a 5 year plan for departmental training needs. The Division should also complete a budget each year as part of the planning process. Until the training needs of the department are identified for the future, the training division will always lack sufficient preparation to provide the increasing levels of training required and expected.
- The DCFEMS should be more productive in increasing upper and mid-level officer training by taking greater advantage of the quality cost effective training at the U.S. Fire Academy. The department should not rely on individual officer initiative to request attendance at courses, but, identify key positions which need USFA courses.
- The Training Division should be the coordinating agency within the department for this effort. The commander of the training division along with top management of the department should identify the key officer positions and the appropriate USFA courses. The officer (fire and EMS) applications should be submitted for attendance every fall after the publication of the USFA course schedule.

CHAPTER 8 – COMMUNICATIONS

This chapter discusses the Communications Division, which reports to the Assistant Chief, Operations. It is responsible for the Central Communication and Dispatch Center for fire and EMS calls, and the communication equipment used throughout the department. A crisis mode of operation in communications has, because of many factors over the past ten years, become the norm.

Organization

The question of whether Fire/EMS communications should be consolidated with 9-1-1 and police communications has been debated within the city for some time, but is not yet resolved. This is a vital issue, and the ultimate decision will have a considerable bearing on the manner in which many other fire/EMS and police communications issues are addressed.

Consolidation is feasible, but the communications consolidations that have been successful have been the result of a total commitment by all departments involved and the product of extensive planning. These conditions are not evident at this time. One small indication of this: Police communications personnel initially answer all 9-1-1 calls (fire, police and EMS) with the verbal greeting "Police Emergency, Operator ###." This is not the quickest or most effective way to determine what type of service (police/fire-EMS) is needed by the caller.

The present staffing of the operational, support and administrative components within the communications division is the product of evolution, and is not based on an assessment of current or future needs.

Budget

The Communications Division budget is developed largely by referring to the current and/or previous budgets and making adjustments in dollar amounts. There appears to be little relation to need, changing technologies, past experience or future plans.

Communications Division management is restrained from managing its own budget (as in most divisions).

Vendors are reluctant to bid on District fire/EMS communications work for fear of delays and/or non-payment. This in turn increases costs and stymies competition.

The communications budget is a "responsibility center" but not organized as a true "cost center". Actual personnel costs are difficult to determine. When vacancies, because of actual vacant positions, annual and sick leave, etc. are filled by use of non-communications division personnel (i.e., firefighters), the cost of that overtime is borne by the Firefighting Division, as opposed to it being "charged back" to the Communications Division. This creates a distorted picture of the true personnel staffing costs of the Division (and increases the apparent cost of fire suppression.)

The Communications Division previously handled many computer operations within the Department. Over time, some but not all have been informally reassigned to the Management Information Services component of the department. Many of these operations remain funded from the Communications Division budget, further muddying cost accountability.

Personnel, Operations and Physical Plant

The Communications Division has three customers: the citizens who live, work, or visit the nation's capital; the Emergency Medical Service Bureau; and the rest of the Fire Department. At this time the culture of the Communications Division does not

always reflect the need to strive for customer satisfaction. These have been difficult years that have taken a great toll. Many good people work in the Communications Division under very difficult conditions, and there is a great need to improve their morale and outlook for the future.

The overall mood of personnel at this time is a mix of depression stemming from what they have been through, combined with hope that things will/must get better.

The role of communications within the department is vital and demanding; it requires highly qualified and trained personnel to carry out the division's mission. The new employee recruitment, qualification and selection processes are fragmented and not as effective as they need to be.

The physical condition of the current communications center is deplorable by any standard. The physical condition of the "new" three-year-old building adjacent to the communications center, given its age, also is deplorable. (This is one of, if not the, newest building in the District's building inventory.) The grounds of the current and new communications buildings and the roadway (McMillan Drive, N.W.) in front of the buildings are in poor condition.

The physical configuration of the fire/EMS Communications Center Operations Room does not facilitate easy communications between working personnel, or adequate supervision.

Equipment/Technology

Radio System - The radio system is inadequate to meet the needs of the Fire and EMS Departments. Problems with it include: the number of channels it operates on; the absence of interoperability capability; age of its imbedded technology; insufficient outside geographic coverage in some areas of the city; insufficient in-building coverage in some buildings (particularly large private and government buildings); and the condition of the components of the below ground Metro tunnel radio system for which the Fire and EMS Department is responsible.

The Fire Department has been attempting to upgrade its communications to a modern 800 MHz trunked radio system since 1984. One of the barriers to doing so is the need to get FCC approval for a renewal of frequencies. Because of a lack of funding for the new system, the time expired on the right to retain the new frequencies that had been secured. It is still unclear how this matter will be finalized. The Director of the fire/EMS communications center reported that the FCC is currently reviewing the license application.

Funding is already approved and budgeted, and a contract exists with which to purchase the system. Given the condition of the present system, the new one should be purchased as soon as possible after granting of the license.

Before proceeding with the new system the number of transmitter/receiver sites necessary to ensure that the system provides adequate exterior and interior radio coverage needs to be reassessed by an independent (non-District/non-vendor) qualified authority. We believe the four sites currently planned may be insufficient (though the potential vendor, Motorola, guarantees the performance of the system in the contract).

In all fire and EMS vehicles, the new radio system should have mobile equipment with the ability to indicate via data transmission, without the need for voice transmission, the status of a unit (i.e., enroute to incident, arrived at scene, enroute to hospital, arrived at hospital, in quarters). This feature will improve the reliability of response time data, lessen radio voice traffic, and assist in the development of performance measures.

Many fire/EMS units responding to large buildings find they cannot communicate from within the building back to the communications center, and vice versa. This is because of the concrete and steel construction of many buildings. A new radio system will lessen this inability to some degree but not eliminate it. A new radio system should incorporate a cache of small, portable, remote receiver sites that can be set up at major incidents in the building, to enhance radio communications.

Fire Station Alerting – The Vocalarm System is the primary means for dispatching fire/EMS units when they are in quarters. This system is in very poor condition and made workable only through resourcefulness and diligence of communications division personnel. The system is in dire need of replacement. It should be replaced by a fire station alerting system (the current more appropriate name for a vocalarm system) that is part of the radio system. This is a more efficient, cost effective, and easily maintained approach to meet the need.

Computer Aided Dispatch (CAD) – The Computer Aided Dispatch (CAD) system is no less important to Fire and EMS operations than the radio and vocalarm systems. The current system is much newer than the radio system, but in relation to rapidly changing computer technology it is quickly reaching the point of technological and functional obsolescence. The Fire and EMS Department plans to purchase a new CAD system, possibly from the GSA schedule. We urge caution in this approach. To meet the Fire and EMS Department's needs from the standpoint of dispatch functionality, management information and records management, the CAD system should be carefully specified in a Request for Proposals (RFP) and purchased by a competitive process. It needs to be purchased on an accelerated basis, given that for, similar reasons, many communities are replacing their CAD systems at this time, or will be over the next several years and there will be a queue.

Automatic Vehicle Location Systems – EMS needs must be considered in the design of a new CAD system. Currently a major impediment to improving EMS response times stems from the need for EMS units to transport patients to hospitals remote from the scene of the incident. When the EMS units return to service, they are often far from their normally assigned geographic area. If the CAD system could recommend the actual closest unit to the location of a call, based on tracking the actual position of the EMS unit rather than the location of its station, EMS response times could be significantly reduced, and efficiency increased.

Such systems are available and known as Automatic Vehicle Location (AVL) Systems. (The name more accurately should be an Automatic Resource Location (ARL) System, because the technology applies to individuals outside of vehicles as well as to

vehicles.) An AVL/ARL system should be given active consideration as a means of improving command/control and deployment of EMS resources, and reducing EMS response time.

Mobile Data Terminal – Many fire/EMS department utilize a Mobile Data Terminal (MDT) System to exchange important location, hazard and EMS patient information in a quick and secure manner. A MDT system should also be given active consideration for use in all EMS and some selected fire units.

Tunnel Communications – The ability of fire/EMS units to communicate via radio when operating in the Metro tunnels below ground is severely affected by the portion of the Metro Communications system for which the Fire and EMS Department is responsible but which is not being maintained. This is a critical operational need and could have a severe negative impact on the safety of Metro passengers, firefighters and EMS personnel. Notwithstanding a new radio system, the current under ground portion of the Metro radio system needs immediate repair and ongoing maintenance.

Purchasing and Maintaining New Technology – Outsourcing should be considered for the installation and maintenance of the various technologies discussed above. The Fire and EMS Department would then need only a small unit in-house with the skills to make emergency repairs.

Communications Training

At present, there are two components to training new fire/EMS communications employees. One deals with fire operations procedures, and the other with EMS operations. Combined, they take approximately six months to complete. Only when both are completed can new employees be assigned to a shift. Much of the fire operations training material presented are the result of a contract with a vendor. Given the subject matter covered, this six-month period seems too long.

Notwithstanding the fire operations training provided to communications personnel, the firefighter interviewed roused questions about the quality and adequacy of fire communications, based on his experience and on monitoring equipment.

The Fire and EMS Department has adopted an Emergency Medical Dispatch Pre-Arrival Instruction package purchased from a vendor. Part of the vendor's contract incorporates a personal professional certification process for Communications Division personnel that is largely administered by the staff of the Emergency Medical Service Bureau. This contract should be thoroughly reviewed prior to extension or renewal, not because of its protocols, but rather because of the labor-intensive review required to establish certification.

The importance of adequate communication training cannot be over emphasized--it is critical to the delivery of effective service. However, given the cost of this training combined with the number of persons dedicated to provide the training, the entire fire/EMS communications training system should be reviewed and amended if necessary to be more cost effective.

Intra-Department Communications

There is no department-wide "e-mail" system or computer network. This creates inefficiencies in intradepartmental communications, especially in the dissemination of important notices, memoranda, and general orders.

Any written document that receives department-wide circulation must be hand-carried to the intended recipients. The delivery of some critical documents (e.g., directives or special orders) requires that a supervisor not only hand-deliver the document, but also obtain a signature from the recipient. Should a recipient be out sick, on annual leave, or otherwise absent, completion of the delivery process may be delayed substantially, thus creating administrative headaches for the supervisor. Modern e-mail systems can be programmed to deliver documents to all recipients on certain lists, and to provide the sender electronic confirmation that the intended recipient not only received the document, but "opened" it (indicating that the document was examined). In the

context of accountability for knowledge of directives or orders. e-mail systems offer unsurpassed ease of both delivery and documentation of receipt.

Other Comments

9-1-1 Tax – The District of Columbia is one of the few cities in the nation that does not utilize a 9-1-1 tax to offset the cost of 9-1-1 service and other costs associated with the personnel, training, administration and equipment/technologies used in the dispatch of police, fire and EMS. This type of tax also helps recover the charges levied on a city by telephone service providers to provide 9-1-1 service and maintain 9-1-1 database information.

Fire Alarm Boxes – The fire/EMS communications division has recently removed the old, malfunctioning, and no longer necessary fire alarm boxes from various locations around the city. However, still remaining at those locations are the pedestals in which the fire alarm boxes were housed. The vacant housing has wires exposed. Although not energized, they leave a negative impression on the public. The pedestals should be removed.

CHAPTER 9 – SERVICES

A cluster of support functions are gathered in one of the major bureaus of the fire department. under the Assistant Chief for Services.

Under this function are management information services, research and development, professional standards (including safety). fleet maintenance, compliance. property and supply. and personnel liaison. This chapter summarizes the needs in each of those areas.

Management Information Systems (Information Technology)

This section presents an overview of the MIS function across the whole department. Additional specific problems in computer support are addressed in the chapters on each fire department function.

Current Systems - The MIS function of the D.C. Fire and EMS Department (DCFEMS) is responsible for information technology at 43 locations around the metropolitan area:

1 DCFD Headquarters (Grimke Building)
33 Fire Houses
2 Emergency Medical Services (EMS) locations
1 Fleet Maintenance location
1 Training Division location
1 Fire Prevention Division location
1 Communication Division location
1 Warehouse
1 Radio Repair
1 Police and Fire Clinic (at Providence Hospital)

The MIS director seemed very knowledgeable of the field and the departments' MIS problem,. Current PC configurations were estimated by the MIS Director as approximately the following:

30 percent	386 models and below
60 percent	486 models, 4MB & 8MB Memory
10 percent	Pentiums or above

The FEMS shares a high-speed Ethernet LAN (with 3 routers) with the DC Corrections Department. It has been designed for high reliability at data rates up to 100 mbps and is connected to the DC WAN to provide connection to the FMS. FEMS headquarters and EMS locations have recently been connected to the citywide Wide Area Network (DCWAN). Other divisions have not yet been connected. These are good ideas.

The FEMS and the Department of Corrections (DOC) have been working on a joint effort known as the "Technology Center" in the Grimke building. The headquarters of both departments are co-located in the Grimke Building. Co-location is a significant factor in establishing the commitment of both departments to this project. The Technology Center concept of operations is a model of interdepartmental cooperation worth emulating by other departments and the District at large. The Technology Center provides:

- Technical staff interaction and support
- Application prototyping and testing
- Multimedia training and presentations
- Hands-on interactive training for FEMS and DOC personnel
- Continuous skill development and easy user accessibility

Problem Areas – The current information technology infrastructure that encompasses the above facilities is marginally adequate to support any new automation efforts or additional network connectivity. The infrastructure is serviceable, at a minimal level, but is very fragmented, old, and poorly utilized in key operational areas. Many divisions of the Fire Department are not computerized and have to use paper records. They are wasting expert time on clerical functions. Fire stations are still forced to use carbon paper for record keeping.

The Fire Department should consider replacing, at the minimum, its LAN connected workstations by workstations that are compatible with the MS Windows-based operating system. As stated in the most recent DC information technology strategic plan, *"Information Technology Strategic Plan 1997 – 2000,"* "upgrading older PCs to support MS Windows is not cost effective, given the low prices in the market place for fully configured 80486 and higher MS Windows-based PCs." It would be better for the department or all district agencies for that matter, to purchase new PCs in a phased approach and implement a replacement schedule for the purchase of future equipment. This will produce maintenance and support benefits that will help offset the cost of upgrading.

The DCFEMS has been poorly served by its existing technology and related expenditures in part because it has not had a well planned and articulated technology and information systems policy (nor does the city, across departments. Budget constraints have impeded the acquisition of new technology, the maintenance of previously purchased systems, retention of adequately trained systems and network personnel. Accountability for ensuring that all technology supports the DCFEMS service delivery and operations mission has been poorly defined. This has resulted in many different applications and databases being used locally (at different DCFEMS locations), sometimes without the knowledge of the MIS director. These local applications and databases are therefore not supported by the overall DCFEMS MIS function but by the user location. The current MIS Director has recently developed a draft technology strategic plan that will address many of these issues. This plan should be finalized and presented to the Fire Chief and others that have funding and decision making authority.

The DCFEMS cannot afford the multiple, on-going streams of maintenance and support costs associated with continuously upgrading PCs and outdated applications. It cannot afford the operational costs of non-integrated systems. The Fire Chief and MIS Director should identify common functions performed by multiple divisions, standardize functional procedures based on "best practices" whether internal or external, integrate information requirements and work-flow, and standardize selection of software and hardware to support the common functional requirements.

Below is a summary of the key problem areas:

- Current infrastructure is inadequate for future needs
  - Fleet Maintenance, Training, and Fire Prevention Divisions (all separate locations) are not linked to a LAN
  - DCWAN connections are non-existent in some locations
  - Equipment is serviceable, but only at a minimal level
  - Systems are fragmented, different applications used at different locations
  - Some critical hardware and software, e.g., file servers, Network software, Modems, and PCs, is employee-owned.

- ***Inadequately trained IS staff, insufficient number of IS staff***
  - Currently 3 people assigned (plus 2 detailed)
    - 1 person on EMS payroll working on EMS Network
    - 1 person on Communications payroll working on the Computer Aided Dispatch system (CAD)
    - 3 people under the MIS Director were originally working with a Unisys mainframe (mainly data entry) that is no longer in use. Their knowledge of the current technology needed at DCFEMS is minimal (knowledge is needed of Networking, Object Oriented Application Development, Relational Database Management Systems, PC Configuration, etc.).

- ***Lack of Money for adequate upgrades, system development, and knowledgeable IS staff***
  - MIS budget for FY97 was $150,000
  - Unable to hire knowledgeable IS staff, unable to pay competitive IS market salaries
  - The Computer Aided Dispatch system (CAD) is old and needs to be re-developed [see communications chapter]. CAD system parts for repairs are hard to find, hardware used is becoming obsolete

- ***Currently no Inventory control of IT equipment***

- The MIS department does not have an inventory control mechanism for IS equipment. However, a proposal to implement a bar-code inventory control system is currently being developed

- ***Data is kept in many forms (local databases, files, logbooks, etc.) at different locations***
  - Data is kept in different database software applications, depending on local preference of users, without any particular guidance.
  - No standard software suite is mandated and installed agency-wide
  - EMS personnel are using manual forms for ambulance run reports which are then filed
  - EMS Imaging System has been out of operation for some time. Personnel to maintain system are non-existent.

- ***No Agency-wide information communication and dissemination mechanism***
  - There is no mechanism for DCFEMS personnel to obtain Fire Department rules and regulations electronically
  - No information is provided on the internet regarding the DCFEMS

- ***Currently insufficient IS security measures on PCs***
  - Passwords are not regularly enforced or changed on PCs
  - Lack of system-enforced security and control measures leads to waste, error, and potential fraud/abuse

Improvements – Many IT improvements have taken place or are currently underway. Some of the positive steps are as follows:

- Installed basic LAN system in Grimke, using primarily personally owned and borrowed equipment and software (File Server, Network Cards, Network Software, etc.)
- Connected headquarters and EMS department to the citywide WAN to allow access to CC mail
- Developed draft Strategic Plan and Presentation

- Developed budget plan for department-wide information technology for FY98. The plan was for $5.5 million; the department was able to secure $1 million. While significantly less than needed or requested. it is a start in the right direction. The budget for FY97 was only $150.000.
- Began acquisition of new personal computers and network components within very limited budget.
- Developed draft hardware and software strategy and standards for the department
- Provided internet connectivity to selected users via dial-up accounts
- Developing a standard help desk function
- Providing hardware and network equipment for Fleet Maintenance's automated work order system. This system is 80 percent complete.
- Developed proposal for bar code inventory system for Fleet Maintenance. Process now done semi-manually (information is handwritten and entered into a database).
- Currently developing an automated Fuel Ticket System. The project is in two phases. short and long term. Short term: Develop system for getting fuel ticket data into a computer database. Long-term: Move to a fully automated fuel system.

Personnel Liaison

The Personnel Liaison function of the Services Division is staffed by one FTE. The Fire Department lost its Personnel Department during the 1980 establishment of the City's Central Personnel Office (CPO) Personnel Liaison is the department's interface with the CPO. All departmental personnel issues are initially addressed by this position, and then forwarded to CPO for action. The following are issues and concerns resulting from this organizational structure and dependence on CPO:

Liaison with CPO – The working relationship between the Personnel Liaison and CPO appears to be strained; the CPO was said not to return calls, and not to provide the necessary customer service.

Lost Records – Departmental personnel records are maintained at CPO. Employees wishing to view their records must make arrangements through the liaison, who then coordinates the visit with CPO. Often employees arrive at their appointment to find the CPO has lost their records. This has been a frequent problem, and is causing serious morale problems.

Employment applications and disclosures are held at CPO, and CPO has lost and/or misplaced many of these documents, too. This has caused problems in situations where employees receive additional employment points based on their disclosures (e.g., of their D.C. residency).

Employees are required to maintain a local residence for five years after hire. Several employees' scoring and standing on the hire list was influenced by the residency requirement. Validation of employee specifics is impossible without the signed employee disclosures.

Technological Support – Personnel Liaison has one 486 computer, with an old version of WordPerfect. There is no electronic data interaction with CPO (i.e. Local Area Network, internet e-mail). Interaction requires daily trips for both pick-up and delivery. Fax machine is sometime used, however it is often out of service.

Out-of-date PDs – CPO is still using 1960s vintage Personnel Descriptions (PDs). The technical requirements for some positions (e.g., Fleet Mechanics) has changed, however, PDs reflect generalist type skills. Consequently the new hires cannot perform the required work. The Department's Personnel Liaison cannot get CPO to update the PDs.

Property and Supply

As part of the Department reorganization on August 31, 1997, a new property and supply unit was created which combined two previous supply functions (Household & Uniforms, and Medical Supply).

Problems with the adequate provision of supplies (purchasing and distribution) is hampering delivery of most Fire and EMS functions, and is a major negative impact on morale.

Property System – The Fire Department has no dedicated Property Officer, and no formal centralized Property Management program. There are no standardized procedures for assigning accountability of departmental property. They do not have a bar code system or central inventory, commonly found in governmental organizations.

Property (e.g., office equipment, specialized equipment, furniture, etc.) is delivered to the customer without responsibility for the item being assigned to an individual and/or office.

Inadequate Supply System – Supply functions (Household/Uniforms and Medical Supply) were combined in theory during the recent reorganization. The functions are not yet integrated and still operate as independent sections. Advantages of a combined operation (efficiencies and economy of scale) are not being realized. The following factors are an impediment to that process:

- Lack of a comprehensive mission statement and/or strategic plan.
- Inadequate facilities to house a combined operation. Current facilities for both supply sections are inadequate, dispersed, and contribute to both spoilage and shrinkage.
- No Supply Chief position; each section has its own supervisor.

Medical Supplies – The Medical Supply section has 4 FTEs. It operates from a small storeroom located in the headquarters building on Vermont Ave. They receive vendor deliveries, keep inventory, and make distributions from this location. They have approximately $175,000 worth of supplies in inventory.

Their storeroom has insufficient storage capacity, an inefficient layout, and inadequate security. High-risk items, (e.g., pharmaceuticals and syringes) are kept in locked cabinets, but access is not sufficiently controlled.

Household & Uniform Supply – The Household/Uniforms Supply section has 3 FTEs. Operations consist of two storerooms at the headquarters on Vermont Ave., and a warehouse on Park Road. They have approximately $200,000 in inventory. Deliveries are received and distributed from both locations.

There are many problems with the Supply function:

- Storage capacity at Vermont Avenue is extremely limited. Some supplies are being stored on one of the back stairwell vestibules. (Would this be permitted in an inspection by the Prevention Division?)
- Security at the storage areas is almost non-existent. Security measures and inventory control is minimal to non-existent in both supply sections. Often the employees are out making deliveries, leaving the storage areas vulnerable.
- The primary facility, the warehouse on Park Road, is an old fire station. The facility is in total disrepair, dirty, and rodent infested. Theft is a major concern at the warehouse, due to the location and physical condition of the structure. A large number of items in the warehouse show signs of both rodent and insect infestation.
- The physical layout of the storage area is an impediment to access control.
- They have an old antiquated DOS-based computer inventory system. The system is not accurate or reliable, and gives very little useful information.
- They do not have a formalized inventory system. The current inventory consists of paper notes and the memory of their employees. Based on our inspection of the facilities, and employee interviews, we are concerned that there is a significant amount of shrinkage and spoilage in the supply operations. However, without an inventory system, those findings could not be quantified and/or validated.
- Neither supply section takes advantage of sole-source and/or just-in-time contracts.
- No efforts have been made to outsource any of their supply needs.
- Office supplies are ordered independent of any city-wide group purchase discount.

- Electronic ordering is non-existent, both to vendors, and from the supply customers.
- All transactions are done by paper (i.e., forms, letters, purchase orders). Medical supplies are distributed after a supply technician accomplishes a fiscal count of the customer's inventory, and replenishes those stocks that have dropped below preset stock levels.
- The problems in these operations have resulted in firefighters being forced to purchase their own uniforms and protective gear such as gloves and boots due to delays in procurement.

Research and Development

This position had been vacant and only recently was filled. The "R&D" shop is somewhat of a misnomer. It includes planning for the department, stations and other facilities maintenance, medical services for the Department personnel, and grant application.

Many facilities are in terrible conditions, as discussed under the Firefighter, Training, and Property and Supply sections above.

This is an important function in the department that needs to get up a head of steam.

Facilities Maintenance – The poor facility condition concern was evident in visits to many stations. To put it simply, the facilities are not being maintained. There were many examples found even in the limited time of this study phase:

- Roof leaks have not been repaired (some, e.g., Station #18, are five years waiting).
- Station #27 has a sewage back-up.
- Air conditioning systems in most stations don't work
- Employees have to purchase station supplies
- Most repairs are done by station personnel
- Station #10 personnel get parking tickets (at shift change they have to park in alley because of insufficient parking on site).

- No security fences – existing ones not repaired
- Firefighters had to repair a toilet back-up at Station #30
- Lights burn out and are not replaced (the energy conservation installation does not work – broken lights are never repaired).
- Exhaust fumes from poorly ventilated apparatus bays cause health problems. Some stations are very old and do not have provision to exhaust diesel fumes outside of the building – a serious, long-term health hazard.
- Firefighters bring in their own tools and appliances; (e.g., saws, entry saws, batteries).
- At Station #22:
  - Floors cracking with holes.
  - Bay door inoperative (three years).
  - Radio base dispatch unit broken (6 months).
  - Roof has leaked for three years.
  - Dorms have an open bay, despite female firefighter presence – no cubicles.
- At Station #16:
  - Holes in ceiling
  - Station lights not repaired
- At Station #15:
  - Broken lights
  - Firefighters painted station with their own money
  - Rear wall in parking lot ready to collapse

Another problem is the service contract with DPW for facilities maintenance, which is not cost-effective. Prices are exorbitant. Quality of work is poor. DPW charged FEMS $10,000 for "work" on a heater/boiler. Fire contends it was only an inspection. DPW levied charges of $86,000 of which Fire could account for only $40,000. No itemization or invoice detailing cost for services was rendered. Further examples of high DPW charges are given elsewhere in the report (Chapter 5).

Professional Standards

A battalion chief heads this function, which includes safety of department personnel, labor relations, special projects, regulations, and internal investigations. There is inadequate staffing to handle all of its functions. Of greatest concern is the lack of adequate attention to worker safety.

Safety – There is only one safety officer attempting to address all of the safety functions for a department with over 1,600 employees. The DC and Emergency Medical Services Department ranks as one of the largest 150 fire service providers in the country. Smaller departments, such as Metro-Dade (3 safety personnel), Atlanta (3 safety personnel), and Birmingham (3 safety personnel) all provide greater attention and support to their safety function.

Approximately 75 percent of the SCBA bottles in the entire department are not up to date in hydrostatic testing, which is required every three years. This is in violation of OSHA regulations and DOT standards. Some bottles are out of date by several years. On others, the dates and serial numbers have been obliterated and are unreadable. Records are reportedly kept "somewhere in maintenance," but without the serial numbers and dates it becomes impossible to track what is due for testing or replacement. About 75 percent of these SCBA bottles were said to be reaching the end of their maximum service lives within the next year or two, which will require a major capital expenditure to replace them.

Some additional concerns about safety:

- The department has had no written risk management plan, though a draft was being reviewed as this report was written.
- Beyond the initial employee injury report, the safety office has no involvement with injury reports, non-firefighter workman's compensation, accident resolution, employee nutrition/wellness, or return to work.
- The review of accidents for the purpose of corrective or future prevention is not in written policy format.

- The incident command system policy refers to on-scene incident safety functions but does not train or specifically identify functions/duties. At the incident scene anyone from the assigned complement may be assigned the safety responsibilities rather than personnel trained in safety functions.
- Physical fitness training is voluntary, with no structured program in place for the purpose of injury reduction through fitness.
- Personal protection equipment (PPE) has no inventory control system in place and no structured inventory replacement SOP. A significant amount of turnout gear is beyond life expectancy limits, requiring large budgetary replacement expenditures to catch up.
- PPE decontamination and cleaning procedures are not consistent for maintaining an inventory. If a company's gear is contaminated at an incident, the department has no inventory to provide temporary replacements.
- A $50K per year contract is in the process of being implemented to clean firefighter turnout gear. This practice should be reviewed regularly. Cleaning cannot be accomplished in-house with commercial washers because of EPA wastewater runoff restrictions.
- The safety office has no functional involvement in infectious/disease control policy follow-up. There seemed to be limited knowledge of airborne/blood borne pathogen concerns. (OSHA mandates yearly training for all first responders.)
- The Department does not have a centralized coordinating point for job injuries, rehabilitation, light/limited duty, etc. No written policy exists to provide for the productive use of firefighters who can return to limited duty, but not full-duty due to injuries.
- The motor vehicle accident policy needs to be revised.
  - There is inconsistent application of discipline
  - Some personnel are given a re-training/certification course, some get disciplinary actions. The judgment is made by the Accident Review Board, absent of guidelines. The Review board has no policy directions (though there is a proposed draft).

Personnel Performance Evaluation Procedures – The system of measuring performance of firefighters is outdated and inconsistent. It is not objective, and does not have clearly delineated standards. Evaluations are given annually to firefighters for their first three years of employment. They are administered every other year for the next six years, and one five years afterward, with no evaluations past fourteen years unless personnel get promoted.

- There is a draft proposal for evaluating the ranks of Battalion Chief against measurable standards, but is not yet adopted. Holding Battalion Chief more accountable is a key to improving accountability in all ranks below them.
- Personnel responsibilities within the department are scattered and should be centralized.
- There is no "customer-focused" training or orientation for new/incumbent employees, resulting in negative department/citizen interactions. This causes personnel problems, litigation and an unhealthy organization.
- The lack of personnel action (disciplinary) training for supervisors including sergeants, lieutenants, and captains, results in inconsistency of application and action not being sustained at appeal process. Areas for focus are:
  - Collective bargaining agreements
  - District and department personnel regulations
  - DC regulations-adopted in 1991 receives amendments, but needs overview with focus on police and fire inclusion.
  - MOUs outside of the DC personnel regulations govern fire actions and have not been updated since 1988.
- Morale among clerical/support staff is down as a result of above-mentioned conditions. Work load demand, resource allocation, outdated technology, etc.

Labor Relations – There are three separate unions representing the firefighters, communications workers, and EMS personnel. At the present time there seems to be good communications and relations with the IAFF local, and what appears to be a healthy

exchange of information. We were given outstanding cooperation. That does not mean everyone will agree on solutions to the problems, but there was healthy dialogue, and on most of the large issues facing the department, good consensus as to what were the issues.

Some problem areas:

- Labor bargaining agreements need to be reviewed. The current set of multiple documents inhibits consistent policy applications.
- Firefighters are governed by one agreement; EMS governed by a different agreement; civilian/support governed by a third agreement.
- Grievance procedures present the same problem, in that there are multiple options and procedures the department has to comply with.
- The Department's average annual case totals for discipline seem high relative to other departments. There is an average of 270 disciplinary actions and grievances annually. Carryover cases increase the total of open to about 330-350, which creates a record management backlog, too.
- Workman's compensation cases linger in limbo too long without resolution/settlement, resulting in line personnel shortages and excessive overtime.
- Workman's compensation cases are not included in relief factor computations resulting in an inaccurate relief factor coefficient.

Fleet Maintenance

The Fleet Maintenance division is one of the major problem areas in the department. It is responsible for maintenance of all vehicles and equipment, and purchases equipment and supplies. (Some of the problems as they affect Operations were discussed in the Firefighting chapter.) This shop has been hamstrung by several problems:

- Very high workload of repairs, stemming from the very heavy call load per unit, the conditions of the streets, high vehicle accident rates and lack of adequate preventative maintenance.

- City procurement policies that caused inordinate delays for even simple repairs. (Emergency spending authority was given just in June, 1997 to help break the quagmire.)
- Inadequate number and caliber of the mechanics.
- High absenteeism rates (sick leave, AWOL) reduces the available mechanic staff.
- The PDs for shop mechanics were written in the 1960s, and do not have the detail and technical requirements required to recruit qualified personnel for vehicles with modern technology.

All of these need to be and can be improved. In addition, there are several other problems:

- Scarce resources (personnel, space, and inventory) are being used to maintain administrative vehicles. These consist of compact cars and passenger mini-vans.
  - The passenger vehicles are purchased versus leasing; purchasing requires capital investment, and the vehicles tend to remain in service longer periods of time. Leased vehicles can be replaced every three years, maintenance is included, and less initial capital is required.
  - Priority maintenance is given to the emergency response vehicles, and properly so. Administrative vehicles can remain in the shop for long periods of time awaiting maintenance.
- The Fleet's supply storeroom has minimal security and no inventory management system
  - Security involves a series of locked rooms, with items posing a high risk for theft, kept behind locked doors.
  - There is no electronic automation of supply inventory, and very inadequate manual system in place.
  - Shrinkage is a significant problem; missing parts delay repair of both administrative and emergency response vehicles.

- There is no scheduled annual testing of apparatus in place. There is a fear that testing for compliance will result in apparatus failure. No ladder units are annually tested per NFPA standards, and no funds are available. This is a flagrant violation of national safety standards. In 1995, one-half of the department's complement of (16) first line and (5) reserve ladder units at the time were out of service due to axles, transmissions, accidents, parts unavailable.
- Fleet management attempts to follow the Department of Transportation's trucking industry out-of-service criteria, but these criteria are too demanding for an aging, high mileage fleet, and are impossible to implement due to having no reserve apparatus, non-funding of maintenance equipment replacement plan.
- There has been until very recently no officially adopted preventive maintenance program in place, due to:
  - Inadequate funding
  - Difficulty in obtaining parts – no funds
  - Mechanics inadequately trained to work on the present aging/high mileage fleet.
  - System demand is at the 80 percent level for apparatus, while department's fleet maintenance capabilities can only support a 40 percent to 50 percent operation.
- The scheduled preventive maintenance program cannot predict how long a vehicle will be out of service, because:
  - The initial maintenance work often results in discovery of major mechanical needs.
  - Age and high mileage on apparatus results in high frequency of repair needs.
  - Lack of resources.
- Preventive maintenance therefore often takes a unit out of service for an unknown period of time, increasing the reluctance to bring a unit in for maintenance.
- No standard checklist for Preventive Maintenance Program.
- Attempts to hold the mechanic work force accountable have been ineffective due to: