FIRE PROTECTION SERVICES IN LOS ANGELES COUNTY

June, 1972

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REPORT OF FIRE SERVICES SUB-COMMITTEE
LOS ANGELES COUNTY CITIZENS
ECONOMY AND EFFICIENCY COMMITTEE

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LOS ANGELES COUNTY
CITIZENS ECONOMY AND EFFICIENCY COMMITTEE

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June 21, 1972

TO: The Citizens Economy and Efficiency Committee

FROM: The Fire Services Sub-Committee.

REPORT ON FIRE PROTECTION SERVICES

Submitted herewith is a report on Fire Protection Services in Los Angeles County prepared by the committee staff under the direction of the Fire Services Sub-Committee. The staff consisted of Burke Roche, Executive Secretary, and Buell Merrill, Staff Analyst.

The Fire Services Sub-Committee was appointed by Robert Mitchell, Chairman of the Economy and Efficiency Committee, to determine whether the present system of fire protection in Los Angeles County is providing an effective level of service at a reasonable Cost to County taxpayers. The sub-committee was also directed to recommend any changes which would increase the efficiency and reduce the overall cost of fire protection in this County.

We have been engaged in this study for over two years. During that time we have consulted and corresponded with over 70 city and County administrators and elected officials and other experts in the field of fire protection. Their assistance in the preparation of the report was extremely valuable. A full list of these officials and experts is presented in Appendix C of the report.

We are especially indebted to the members of the Fire Sub-Committee of the Urban Problems Committee of the League of California Cities. This group and its Chairman, Mr. Roy Pederson, City Manager of Montebello, reviewed a preliminary draft of our report and recommended a number of constructive changes which we have incorporated in the final draft. They also provided valuable assistance in helping us to compile current fire protection casts of the cities which operate their own fire departments.

Special thanks are also due Dr. Edward Erath, President of Los Angeles Technical Services Corporation, for providing without fee, the services of two members of his staff, Mr. William Larrabee and Mr. John Campbell. These men conducted a statistical analysis of the cost data reported by the 43 departments to determine if there were significant relationships between departmental costs and such other factors as insurance grade and city size. Mr. Larrabee also assisted us in conducting an evaluation of the private fire service concept and its applicability to Los Angeles County.

In the course of this study our staff reviewed a number of reports and articles concerning the problems of municipal fire protection. The publications of the International Association of City Management, the National Fire Protection Association, and the National Board of Fire Underwriters were of particular value as sources of comparative cost data and operating standards.

Reports made available by the consulting firm of Gage Babcock and Associates, Inc., covering a number of studies which their firm has conducted throughout the United States on local fire department organization and operation, also provided valuable source material to our study.

We are also appreciative of the cooperation and assistance we have received from County officials and their staffs, in particular Arthur Will, Chief Administrative Officer; John Maharg, County Counsel; and Richard Houts, Forester and Fire Warden.

While this report could not have been written without the assistance of these many officials, we of course assume sole responsibility for the content and conclusions contained in the report. We submit the report to you and respectfully request your review and approval for formal submission to the Board of Supervisors.

Harlan Loud, Chairman
John Byork
Maurice Chez
Jerry Epstein
Dixon Harwin
Robert Olin
William Torrence

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EXHIBITS

I. SUMMARY OF COMMITTEE FINDINGS AND RECOMMENDATIOMS

This first chapter presents a summary of the sub-committee's full report presented in the chapters which follow. The summary follows the same organizational outline but does not include many details contained in the full report. Therefore, anyone interested in further details should refer to the corresponding section of the full report.

Present Fire Protection Services

There are presently 43 separate fire departments operating a total of 378 fire stations in Los Angeles County - the two large departments of Los Angeles City and Los Angeles County and 41 other city departments. The Los Angeles City department employs 3155 firemen and operates 108 stations. The Los Angeles County department, which consists of the Forester and Fire Warden and three special fire districts, employs 2118 firemen and operates 125 stations.

The other 41 city departments employ a total of 2923 firemen and operate 145 stations. Among these departments only Long Beach, with over 400 employees, is of major size. Glendale, Pasadena, Torrance, Burbank, Pomona) and Vernon - the next largest departments - each have less than 200 employees. The remaining 34 departments each employs less than 100 firemen. Many of them employ no more than 30 to 40 firemen operating out of only one or two stations.

Our analysis indicates that this small unit) multi-jurisdictional system of fire protection creates serious operating problems which both increase the cost of fire protection and reduce its quality. Our purpose, therefore, in this report is (1) to describe and discuss these problems, and (2) to analyze the relative merits of alternatives to the present system.

We do not question the right of any city to operate its own fire department. It is the privilege and indeed the legal responsibility of every incorporated city to provide the best possible services for its citizens. Providing services to protect life and property is clearly one of the most serious responsibilities a city council has.

We believe, therefore, that any decision to change the method by which these services are provided should be made at the local level by the people who are directly affected by that decision. If the citizens of any community wish to maintain their own fire department, this is their decision to make. It is their lives and property which are at stake, and it is their taxes which pay for the fire protection.

Our concern as citizens interested in improving government services and reducing their cost is to present the facts and the issues as dispassionately and objectively as possible. It is up to each city to make its own decision. The objective of this report is to provide the officials of these cities with the relevant information necessary for making a decision directed toward the best interests of their city. Thus it is designed primarily as a reference manual for the use of city officials.

Problems of the Present Fire Protection System

The present fire protection system results in a costly and inefficient placement of fire stations. As every resident knows, the configurations of the 77 cities and the unincorporated area is a complex patchwork of intertwining boundaries, narrow corridors, and isolated islands. Hence, in order for a fire department to serve all areas in its jurisdiction effectively - in particular the remote corners - it must locate stations where they can respond quickly to any area, even though a station in another jurisdiction may be only a few blocks

away across a boundary line. (See Exhibit 5.) Thus, in many instances stations of adjoining jurisdictions are located so close to each other that their effective response areas overlap.

If the boundaries of the 43 jurisdictions which operate fire departments could be ignored, we estimate that 48 of the 378 stations now in operation could be closed with no deterioration in service. The annual operating cost of these superfluous stations ranges from $8.7 to $10.9 million and the capital and equipment investment cost is approximately $7.2 million.

In addition to creating excessive costs, the present system also generates serious operating deficiencies. It does not guarantee that available equipment will always respond to an emergency in as short a time as possible. It does not guarantee, when a major emergency occurs requiring the involvement of more than one agency, that the fire fighting forces from different jurisdictions will communicate effectively with each other in a coordinated tern effort. There is no common radio frequency used by all departments or even a majority of departments.

The present system does not guarantee that the proper amount of equipment will immediately be dispatched to the emergency. It does not guarantee that the fire forces which arrive will always be thoroughly trained to handle a particular type of fire or other emergency. It does not guarantee that effective fire prevention programs will be conducted in all areas of the County, including regular fire drill training for schools and hospitals and periodic inspection of residential and commercial structures.

These are some of the problems in the present fire protection system. They are documented and described in detail in the body of this report.

Alternative Plans for Establishing an Effective Fire Protection System

Our study indicates that there are seven major alternatives that may offer cities an opportunity to eliminate or reduce some of the problems inherent in the present multi-jurisdictional system of fire protection. These are (l{a voluntary association of independent jurisdictions, (2) a County-wide fire protection district mandated by the State, (3) expansion of pre-planned mutual aid programs, (4) inter-city consolidated departments, (5) contract service from another city, (6) contract service from a private firm, and (7) a regional fire protection district with voluntary membership by jurisdiction.

Voluntary Association of Independent Jurisdictions

An attempt to improve fire services through a voluntary association was tried in Los Angeles County only a few years ago. This was GLAVIC - the Greater Los Angeles Voluntary Inter-Governmental Cooperation Committee - which was formed in 1962 as a voluntary association of fire departments.

GLAVIC was formed as the result of a proposal by the Los Angeles City Board of Fire Commissioners to participate with the County in a study of the feasibility of a consolidation of County and municipal fire services. It died two years and three months later, most of its life having been devoted to making sure that none of its objectives or activities would encroach upon the right of any city to self-determination. Its demise was as undistinguished as its existence. It merely stopped meeting because of lack of interest by the participants.

We cannot, therefore, recommend the alternative of a voluntary association. There is no need to repeat the waste of time, effort, and expense of another GLAVIC.

State Mandated County-Wide Fire Protection District

This alternative is in direct contrast to the voluntary approach exemplified by GLAVIC. It would require State legislation assigning

responsibility for fire protection services to a special district with boundaries co-terminous to those of the County.

Such legislation would set a precedent of control by the State which would eventually deny cities their major reason for being cities - that is the right to control and determine the level of those governmental services which have traditionally been considered a *unction and responsibility of local government.

We do not, therefore, recommend a State mandated district as a suitable solution to the complex problems of fire protection in Los Angeles County.

Expansion of Pre-Planned Mutual Aid Programs

There is no doubt that formal mutual aid programs, especially those involving pre-planned or automatic first alarm response patterns, add protective capacity in meeting major emergencies. However, they do not effectively attack the most serious problems generated by the present multi-jurisdictional system, in particular the problems which result from a multitude of small departments with limited resources and a variety of operating methods and procedures.

Therefore, while expansion of these programs should be encouraged, they provide only a limited step toward resolving the major problems of the present system.

Inter-City Consolidated Departments

A fourth alternative open to cities confronted with the mounting cost of maintaining their own fire department is the establishment by two or more cities of a consolidated inter-city fire department. Under present State legislation the participating cities can establish such a consolidated department either under a joint powers authority or through the establishment of a special fire protection district whose boundaries would be co-terminous with the boundaries of the member cities.

Although inter-city consolidation has not yet been tried in Los Angeles County, studies of this approach are currently being conducted in three different areas of the County. In addition, two consolidations, one using an authority and the other a district system, have been implemented in Orange and Contra Costa Counties. Thus this device is generating considerable interest as well as activity as an alternative to single-city operation.

In the Orange County consolidation, the four cities involved - Fountain Valley, Huntington Beach, Seal Beach and Westminister - expect to achieve annual savings of over one million dollars when the program is in full operation in 1973. The four cities now operate a single co-mmunications and dispatching center and in the next phase of the program have agreed to combine their training and fire suppression operations.

The figures on the consolidation in Contra Costa County are equally impressive. Six small city and district departments were combined in this consolidation using the device of a special fire protection district. Since 1964 when the consolidation began, the tax levy for the district has decreased from $0.872 per $100 assessed valuation to $0.724 in 1971, a decrease of 16.97%.

There are, of course, problems to overcome in combining departments with different operating procedures and different salary rates. We believe, however, that the evidence clearly indicates that inter-city consolidation may offer some cities which now operate their own departments, particularly smaller, contiguous cities, a promising opportunity to reduce costs and at the same time improve the level of their fire service.

Contract Service from Another City

The same State legislation which authorizes two or more cities to establish a joint powers authority also enables one public agency to contract

for a government service from any other public agency. In contrast to the extensive use of this type. of contract service from the County, however, few cities in California have contracted for a municipal service from another city.

Nevertheless, our study indicates that some cities, particularly smaller cities, could achieve cost and service benefits by contracting their fire protection from a larger neighboring city rather than provide this service for themselves. Similar to inter-city consolidation, such a contract would enable two cities in effect to combine their resources to provide a single fire service to both cities.

Furthermore, the concept need not be limited to two cities; a system of contract service suited to a particular area could be established among a group of cities, one city agreeing to provide the service and the others agreeing to contract for it.

Contract Service from a Private Firm

In Arizona a private firm, operating as a State chartered public utility, provides fire protection to the City of Scottsdale and a number of incorporated and unincorporated communities in rural and suburban areas. This firm, called Rural/Metro, has been in business for 22 years and now operates 19 facilities in an area of 2,700 square miles with a population of 250,000.

Because fire service from a private firm is uncommon in the United States, we conducted a survey of Rural/Metro operations with the objective of determining its relevance to communities in the Los Angeles area.

Our interviews with the City Manager, Dale Carter, and a number of Scottsdale residents indicate that city officials and residents of Scottsdale believe Rural/Metro is providing the city with an effective fire service at a very favorable cost.

It may well be, however, that the public agency concept of fire protection is so traditional in the Los Angeles area that any attempt by a city to adopt a private contract approach would create such a furor that it would not be worth the effort. Moreover, the adoption of a private contractor system by one or a few cities in Los Angeles County would not solve the serious problems created by the present small-unit, multi-jurisdictional system now in operation.

Nevertheless, in spite of the serious problems that might accompany efforts in this area to adopt it, we recommend that cities investigate its feasibility. We do not believe that the concept should be arbitrarily dismissed because it has never been tried before in this region.

Regional Fire Protection District with Voluntary Membership by Jurisdiction - What City Officials Say

This seventh alternative is currently provided by the Los Angeles Consolidated Fire Protection District. This district is one of three special districts which is administratively integrated with the County Forester and Fire Warden in a single agency commonly referred to as the County Fire Department.

The Forester and Fire Warden provides fire protection to the unincorporated watershed and forest areas of the County and is financed by the County general fund. In the district operation, two of the districts, Universal City and Dominguez, contain only one station each. The third, the Consolidated Fire District, operates out of 88 stations and serves 35 incorporated cities which have elected not to operate their own fire departments. The district also includes all unincorporated areas in the County which are structurally developed. Funding for district services is derived from a special tax levy on owners of property within each district.

To help us analyze the Consolidated District as an alternative to independent city operation, our staff conducted personal interviews with 48

city officials in 35 district and independent cities. (See Appendix C for a list of these officials.)

Our interviews with district city officials indicate clearly that they are strongly supportive of the district system. Since 1967, five cities have discontinued their own fire departments and have annexed to the Consolidated District - Glendora, Signal Hill, Maywood, Huntington Park, and Bell. The figures supplied us by the city officials of these five cities show that these annexations resulted in the closing of two fire stations, a reduction of 49 firemen positions, and the elimination of 27 pieces of apparatus and automotive equipment. Total annual reduction in the cost of fire services to these cities is estimated at $588,086.

The city officials in these five cities, as well as those from cities which have been in the district since incorporation, all expressed general satisfaction with the quality and level of the district service and the responsiveness of the district to local needs. A number of these officials, however, expressed serious concern over the increase in the district tax levy last year from $0.65 to $0.7499 per $100 of assessed valuation, the largest single increase in the history of the district. Most of these city officials believe that this increase was due primarily to what they believe were excessive salary raises given to County firemen - 117. for the 1971-72 fiscal year. Other than this concern over the County's ability in the future to maintain effective control over district costs, the consensus of district city officials is that if they operated their own departments, they could not match the cost or level of service provided by the district.

Officials from cities which operate their own departments believe that individual cities can provide a more responsive level of service at a lower cost than is possible through the district system. They believe smaller departments

can operate more efficiently, and that the large size of the district organization results in inevitable waste and inefficiency. Moreover, they believe that the district, because of its size, is vulnerable to union pressures and the threat of strikes; enlargement of the district will only increase this vulnerability.

Many of these officials also believe that the district has been able to provide service to cities at an attractive cost because the County general fund is being used to subsidize district operations. Some city departments, they recognize, are too small and their tax base too limited to provide the resources and manpower required to maintain a high level of fire service.. They believe the solution to this problem, however, is not annexation to the district, but either inter-city consolidation of fire services or contracting fire services from a neighboring city.

The prevailing theme of these officials is that their governments are close to the people and responsive to their needs. It is therefore imperative, they believe, that cities continue to control the cost and level of so important a municipal service as fire protection.

Regional Fire Protection District with Voluntary Membership by Jurisdiction - Committee Comments

Our comments are directed toward what we believe to be the main questions which city officials raise about the operation of the Consolidated Fire District.

The Subsidy Question - Our examination reveals no evidence that the general fund is being used to subsidize district operations, as a number of independent city officials believe. A detailed report of our findings is presented in Appendix D. Our conclusions are substantiated by studies conducted by two outside management consulting firms who also conducted studies on this subject, one for the Grand Jury and one for the City of Commerce.

The Size question - Our conclusion is that large and mall organizations each have their advantages and disadvantages. Consequently, the most important ingredient in the effective operation of a fire department is not its size - assuming it is of sufficient size to marshal adequate resources - but rather the individual intelligence and capability of its management.

The Union Question - The key question which city officials raise is: Will enlargement of the district lead to undue influence by the union in district operations) in particular, in the determination of salary rates and working conditions? The answer to this question will depend to a great extent on the future effectiveness of the collective bargaining system established under the recently adopted Employee Relations Ordinance.

For the past two years the salary raises approved by the Board of Supervisors for County employees were negotiated under the terms of this ordinance. Whether one considers these raises as excessive or not, it seems evident that two years experience is too short a time to reach definitive conclusions about the future effectiveness of the ordinance.

To be effective a collective bargaining system must seek to establish an equitable balance of power between the contending parties - unions and management. If it does not, the more powerful party will inevitably establish its interests over those of the weaker party. The result is exploitation by one party over the other - in a government environment either exploitation by government officials of employees or exploitation by the employees of the government's taxing authority.

Only future experience with the Employee Relations Ordinance can determine whether the fears of city officials over union influence in district operations are legitimate. Until further evidence is in, therefore, the union issue must remain open.

The Contract Question Some independent city officials believe that certain unincorporated areas which are adjacent to or surrounded by independent cities might be served more effectively and economically by one of these cities under a contract with the Consolidated District. We believe County officials should explore any possibility to reduce costs or improve service through the contract device. However, our conclusion is that the effect of such contracting would be minimal. The region would still be left with the present maze of 43 separate fire-fighting agencies with all the consequent problems which this many unit system generates.

The Cost Question - Exhibit 9 presents a comparison of city fire department costs with an estimate of what it would cost the city if it belonged to the district.

Anyone examining these figures should be careful about interpreting them in terms of the cost effectiveness of any given department. They do not indicate the relative level of fire service which a city is providing. They also contain a number of hidden variables, the effects of which cannot accurately be determined - factors such as the type and density of structures to be protected, the nature of the terrain, the seasonal weather conditions, and so on.

Thus these figures provide an indication only that some cities now operating their own departments could expect to reduce their fire protection expenditures by joining the district. Other cities apparently could not. In addition, some cities which now provide a limited level of service could expect to improve their service level, although they might increase their expenditures.

The Expansion Question - If the district annexes cities beyond its capacity to place city firemen in vacant positions existing in the district, excess positions will be created causing increased costs and an eventual increase in the tax levy. The district on the average has from 50 to 100 vacant positions.

Consequently, since the district policy is to insure that all city firemen who request it are placed in district positions, its ability to annex cities without raising costs is limited. It is thus clear that as the district is currently structured, any acceleration in the number of city annexations must be programmed gradually over a period of years.

The Control Question A number of city officials from both district and independent cities whom we interviewed criticized as excessive the 11% salary increases which were negotiated for most County firemen last year. They also complained that they had no prior knowledge of the County's intended action until the salary recommendations were presented formally to the Board by the Director of Personnel.

In order to improve communication and avoid misunderstandings of this nature in the future, we believe that the officials of district cities should be given an appropriate voice in the key decision making processes of the district.

We recommend, therefore, that the Board of Supervisors instruct the Chief Administrative Officer, the County Counsel, and the Forester and Fire Warden to study the feasibility of amending the present Fire Protection District law to enlarge the governing board of the Consolidated Fire District. We recommend that the membership, now consisting of the five supervisors, be expanded to nine members to include four representatives from district cities.

We believe that this change would go far in correcting a major problem in the present district operation. That is that once a city joins the district, it loses control over the cost and level of services provided to it.

The City-County Question - Our analysis indicates that as many as eight city and district fire stations could be closed by consolidating the Los Angeles City and County fire departments. Further savings could be effected by combining dispatching and communications facilities and consolidating such administrative

and auxiliary service functions 88 personnel administration) accounting, budget preparation, research and planning, and warehousing and supply services.

However, there are major operating differences between the two departments - differences in the cost and complexity of their fire protection problems, in their methods of operation, in their position classification plans, and in their retirement plans. Consequently, although analysis of these differences is required before anyone can reasonably predict that merging of these two departments will produce cost and service benefits. Our conclusion is that although it might prove advantageous to City and County taxpayers, the consolidation of these two departments is not now critical to the eventual evolvement of a rational fire protection system throughout the County. More important at this time is a reduction in the number of small fire departments and the elimination of the maze of jurisdictional boundaries.

Conclusions and Recommendations

We believe the most important effort that can be expended to improve our present system of fire protection is the individual examination by each city now operating its own fire department of the alternatives to single city operation, the alternatives which from our analysis offer an opportunity to reduce the cost as well as improve the quality of their fire services.

Which of these alternatives is the best for any city, we cannot say. The answer to that question can only be resolved by each city itself through an individual study of these alternatives in relation to the particular circumstances which affect the provision of fire services in that city.

In summary we recommend that:

1. City officials of independent cities examine closely the relative merits of inter-city consolidated departments, contract service from another city, contract service from a private firm, and annexation to the Consolidated District

as alternatives which offer a significant potential for reducing the costs and improving the quality of their fire service.

2. The Board of Supervisors instruct the Chief Administrative Office, the County Counsel, and the Forester and Fire Warden to study the feasibility of amending the present Fire Protection District law to expand the governing board of the Consolidated District to include four representatives from district cities.

II. PRESENT FIRE PRTECTION SERVICES

In 1930 Los Angeles County was largely rural. One large city and 44 smaller cities were interspersed among wide expanses of agricultural or structurally undeveloped land. Because these cities in many cases were isolated from each other, it was logical for each to provide its own fire protection. Today, 40 years later, there are 77 cities in Los Angeles County. Although large rural areas still exist north of the mountains, the basin itself has undergone a major metamorphosis, emerging as a vast urban metropolis stretching from Pomona to Santa Monica and from the foothills to Long Beach.

As this growth developed there also emerged a new system for providing fire services to the incorporated cities in the County. Thirty-five cities now receive their fire services from a special fire protection district administered under the jurisdiction of the County and do not operate their own fire departments. This Consolidated Fire Protection District also provides fire services to all unincorporated areas in the County which have been developed for commercial or residential use, such as East Los Angeles, West Hollywood and Lancaster. (See Appendix D for a brief history of the district development.)

Forty-two other cities continue. to provide their own fire services. Thus, while the overall system of fire protection in Los Angeles County can be described accurately as a multi-Jurisdictional system, consisting as it does of 43 independent agencies, there are in reality two quite different systems ;0perating within the County - the independent city system and the consolidated district system.

The Los Angeles City Department

The City of Los Angeles Department of Fire employs 3155 uniformed personnel. It operates 108 stations which service a territory of 463.7 square miles

containing a population of 2,814,152 people. (All population figures used in this report are based upon the 1970 Federal census.)

Departmental operations are highly diversified to meet the fire protection requirements of major harbor and airport developments, heavy concentrations of high-rise and industrial complexes, as well as extensive sparsely settled brush areas stretching from Griffith Park vest through the Hollywood Hills to the ocean and along the foothills to the north.

The administrative head of the department is the chief Engineer and General Manager. He directs the day-to-day operations of the department under the policy guidance of a five-man Board of Fire Commissioners. The budget for the department is apportioned from general city funds.

The 41 Other City Departments

The 41 other city fire departments employ a total of 2923 uniformed personnel. They operate 145 stations, which service a territory of 397.9 square miles containing a population of 2,302,825 people. Among these departments only Long Beach, with over 400 employees, is of major size. Glendale, Pasadena, Torrance, Burbank, Pomona, and Vernon - the next largest departments - each have less than 200 employees. The remaining 34 departments each have less than 100 employees, many of them with no more than 30 or 40 employees operating Out of only one or two fire stations. Three departments depend largely on volunteer organizations for manpower.

Most of these departments operate under the direction of a fire chief who reports to the city manager or administrator.

The Los Angeles County Department

The County fire department employs 2118 uniformed personnel and operates 125 stations. These stations service a much larger territory, but fewer

people, than the Los Angeles City department - 2167.6 square miles containing a population of 1,913,736 people.

The County fire department consists of four separate legal entities - the County Forester and Fire Warden and three special fire protection districts. The administrative head of the department thus serves in a dual role and carries two titles - County Forester and Fire Warden and Chief Engineer of the fire protection districts.

Approximately 70% of the department's uniformed personnel work for the fire protection districts. Two of the three districts, Universal City and Dominguez, contain only one station each. The third, the Consolidated Fire District, operates out of 88 stations and serves 35 incorporated cities which have elected not to operate their own fire departments. (In some cases district and Forester personnel share a single station.) The Consolidated District also includes all unincorporated areas in the County which have been developed for commercial or residential use. The district covers an area of 697.1 square miles with a population of approximately 1,895,000 people. Funding for district fire protection services is derived from a special tax levy on owners of property located within the boundaries of each district.

The remainder of the department's resources are assigned to the Forester and Fire Warden operation to provide protection to the sparsely settled and structurally undeveloped, unincorporated areas, primarily the watershed along the foothills north and south of the Angeles Forest. The Angeles National Forest, which covers most of the mountain area above the foothills, is protected by the National Forest Service and does not come under County jurisdiction. The Forester and Fire Warden, however, provides assistance to the National Forest Service in times of emergency. The Forester and Fire Warden also provides protection to State-interest lands which constitute a large part of the

watershed areas. The County receives some reimbursement by the State for this protection, but the reimbursement amounts to less than 10% of the total operating costs of the Forester and Fire Warden.

The County Charter assigns responsibility to the Forester and Fire Warden to extinguish all structural fires in unincorporated areas not included within any fire protection district. It also requires that the Forester and Fire Warden cooperate with the State Forester and Federal Forest Supervisors in the prevention and suppression of forest fires in the County. The services provided on State-interest lands are considered to be of benefit to all the residents of the County, and all costs in excess of the State reimbursement are a charge against the County general funds.

As also mandated by the County Charter the general fund is charged for services provided to the unincorporated areas not included in a fire protection district, the Angeles National Forest, or State-interest lands. However, this responsibility is minimal, since most of this area is in the far northern desert section of the County, where the fire hazard is low.

Summary Exhibits

Essential statistics on present fire protection services are listed in Exhibits 1-3. Exhibit 1 lists the 43 fire departments in the County, the number of stations in operation, the number of firemen and chief officers employed, and the corresponding insurance protection classification of each department and city. Exhibit 2 lists the population and area of the 42 cities which operate their own fire departments. Exhibit 3 lists the population and area of the 35 incorporated cities which do not operate their own fire departments and are serviced instead by the Consolidated Fire District.

III. INSURANCE PROTECTION CLASSIFICATION

The committees served by the 43 fire departments are appraised periodically on the basis of standards established by the Insurance Services Office (ISO) to determine the adequacy of their fire defenses. The ISO is a national organization created in January, 197i; by the consolidation of six national insurance industry service groups. Subsequently included was the municipal grading division of the American Insurance Association (AIA) which formerly had been the principal nation-wide fire grading agency for large cities.

The Grading Schedule

Appraisal surveys of fire services are conducted throughout the United States by affiliated regional agencies using the "Standard Schedule for Grading Cities and Towns of the United States with Reference to their Fire Defenses," published by the National Board of Fire Underwriters and commonly referred to as the Grading Schedule.

The Grading Schedule encompasses six basic elements which contribute to a community's ability to prevent or reduce loss of life or property from fire. These elements and their relative weight in the overall evaluation are water supply (34%), fire department (30%), structural conditions (14%), fire alarm (11%), fire prevention (7%), and building department (4%).

Although only 30% of the grading schedule is allocated to the fire department, it is actually responsible for 487. of the total, since fire alarm (11%) and fire prevention (7%) must be considered part of its overall function. Factors other than the six basic elements, such as adverse local climatic conditions or the frequency and severity of floods or earthquakes, are also considered in the application of the grading schedule. The evaluation of a community’s

overall fire defenses is represented by an insurance protection class, commonly called an insurance grade, which may range from a low of one, the best grade possible; to a high of ten, the poorest grade possible.

Insurance Protection Class and Insurance Rates

In general, the cost of fire insurance is directly related to the insurance protection class - the lower tile numerical classification, the lower the insurance premiums paid by property owners in a coimiunity. Fire engineers estimate that, in general, a change of one class may mean a difference of from 7 ½% to 9% in fire insurance rates. However, this is a general statement that does not hold true in all cases. The effect of a class change on insurance rates can vary widely depending upon what type of structure and insurance is involved and where the change occurs in the range of classes.

Premiums for homeowners insurance on single-family, wood-frame dwellings, for example, are not affected by changes occurring within the Class 3 to 5 range or between Classes 6 and 7. Also, insurance premiums on industrial and commercial property are largely based upon an individual appraisal by rating agency of such factors as structural characteristics, type of product or merchandise involved, and the additional inplant measures which have been taken to protect against fires. For instance, on properties protected by automatic sprinkler Systems, the rate would remain unchanged from Class 1 through Class 5. In some cases, therefore, a change in insurance class, unless it is substantial, may not have a significant effect upon the amount of premiums paid by certain property owners.

The total cost of fire protection to a property owner is a combination of the tax dollars he pays to maintain his community's fire defenses, plus the cost of any private measures he may take to improve his individual protection,

plus the cost of his fire insurance, plus the cost of fire 1055 not covered by insurance. All these factors, therefore, should be taken into account in determining whether an improvement in the level of service provided by the fire department is warranted. It is possible that an expenditure of funds to improve a water system or add personnel or equipment to the fire department for the purpose of reducing insurance rates may be unwarranted from an economic point of view, particularly if a community is already providing a reasonable level of fire protection. The owner of industrial property, for instance, may derive greater benefit from funds used to improve the fire defenses of his own plant than he would from the equivalent amount in tax dollars spent to improve the community's overall insurance class. As a general rule, however, improvement in insurance class level does result in an overall lowering of insurance costs for the community.

Variations in Insurance Protection Class

It is not unusual for a city or community to contain areas with different insurance protection classifications. In some areas special zones are established where the elements are graded differently because of different local conditions. These special areas are then assigned a different protection classification. The Los Angeles City fire department, for example, has a basic Class 1 grading and most areas of the city are graded protection Class 2. In some areas, however, the protection class is higher, particularly those with long fire department running distances and inadequate water systems. In a few areas the protection class is as high as 9. Similarly, the County fire department is graded Class 2, but again depending upon local conditions the insurance protection class may vary in each community it serves. In some areas it is as high as 9. The majority of the communities range from Class 3 to Class 5.

The grading classifications of the other 41 city fire departments range from Class 2 to Class 7, and the city grades from Claus 3 to Class 7. Most of the cities and their fire departments fall within the three to five class range.

Limitations of the Grading Schedule as a Measure of Performance

Finally, it is important to understand exactly what the grading schedule (between 1 - best and 10 - worst) is designed to measure. It does not directly measure the efficiency of municipal fire protection services. The manual on fire protection published by the International City Managers Association emphasizes this point. "City officials," it states, "have frequently assumed that the `grading schedule is an administrative yardstick which can be used to measure the efficiency of municipal fire protection services. It must be emphasized that it is not, although it measures some factors which would also be covered in a yardstick of efficient administration of fire, water and other departments. Rather it is a device whereby the probability of large fires and conflagrations can be measured. City officials should therefore understand that it is a tool for a specific purpose in insurance rating - not an administrative yardstick." (Municipal Fire Administration, p. 22.)

Similarly, the insurance class assigned to a fire department does not directly measure the quality of performance of a department on day-to-day fire operations. Primarily it is an evaluation of the sufficiency of manpower, facilities and equipment which a department possesses measured against standards established by the Insurance Services Office. It is designed solely for insurance rating purposes to measure the ability of a fire department to prevent an extensive fire or conflagration. Therefore, it does not provide an evaluation of a department's effectiveness and efficiency nor economy of operation.

Consequently, it should not be used in comparing fire departments except in their ability to prevent an extensive fire.

IV. THE JURISDICTIONAL MAZE

The problems which result from a system in which 43 separate fire departments provide services to one metropolitan region may be divided into three types: 1) those which result from the maze of jurisdictional boundaries, 2) those which result from small jurisdictions with limited resources, and 3) those which result from the compartmentalization and fragmentation of services. In this chapter we discuss the first of these problem areas.

Superfluous Fire Stations

As Exhibit 1 shows, there are 378 fire stations operated by all jurisdictions in the County. In many instances throughout the County, stations of adjoining jurisdictions are located so close to each other that their effective response areas overlap. If these jurisdictional boundaries could be ignored and this overlap eliminated, we estimate that 48 of these 378 stations could be closed and still meet insurance grading standards. closing these stations would result in a reduction of from $8.7 to $10.9 million in annual operating costs and $7.2 million in investment costs for facilities and equipment.

Although, as we shall see, this is not the only excess cost in the present fire protection system, it is by far the largest of the cost items. These figures, therefore, deserve careful examination.

Each city which operates its own fire department must assume full responsibility for providing complete fire protection services within its boundaries. Although all cities have some form of mutual assistance arrangements with neighboring jurisdictions, there is not complete certainty that they will receive help from another jurisdiction when an emergency occurs. There is always the chance that an emergency may occur at the same time in the other

jurisdiction which would prevent it from lending assistance. Each city consequently tends to locate its fire stations in response to its own needs, and without too much concern for the proximity of fire stations in other Jurisdictions.

Furthermore) the grading schedule of the Insurance Services Office (ISO) allows only partial credit for the fire protection facilities of adjacent Jurisdictions. Insurance rates, as we noted in Chapter III, are directly related to the degree to which a city conforms to the requirements established by the ISO. Thus, failure of a city to provide effective fire protection services within its own borders will be reflected in higher fire insurance rates for its property owners.

Finally, as every resident knows, the configurations of the 77 cities and the unincorporated area is a complex patchwork of intertwining boundaries, narrow corridors and peninsulas, and isolated islands. (See Exhibit 4.) Hence, in order for a fire department to serve all areas in its jurisdiction effectively - in particular the remote corners and corridors - it must locate stations where they can respond quickly to any area, even though a station in another jurisdiction may be only a few blocks away across a boundary line.

With these points in mind let us now examine some specific areas in which stations are operating in close proximity to each other. Four examples are presented in Exhibit 5. Example 1 shows a Culver City station and a Consolidated District station located a few blocks away from each other. If jurisdictional boundaries were ignored, either one of these stations could service the entire area now protected by the two stations. Example 2 shows a Los Angeles City station in Hollywood located a few blocks north of a Consolidated District station in the West Hollywood unincorporated area. Again, if it were not for jurisdictional boundaries, one station could service the area now protected

by the two stations. Examples 3 and 4 present similar cases of fire service overlap in the present system.

Our estimate that 48 fire stations could be closed if jurisdictional boundaries were ignored is based upon a similar review of station locations extended throughout the County. In conducting this survey we used as a guide AIA Bulletin No. 315, "Fire Department Standards - Distribution of Companies and Response to Alarms" (1963). This bulletin establishes standards for engine company response distances based on fire flow requirements. Fire flow is the amount of water needed to extinguish a fire in a given type of structure. Generally, we used a 14 mile response distance as a standard with a fire flow requirement up to 4,500 gallons per minute. This standard is appropriate for most built up areas, excluding concentrations of very large structures.

Using this standard - with appropriate allowances for local conditions - we surveyed the location of fire stations throughout the County, concentrating principally on those stations whose response areas overlap jurisdictional lines. We did not concern ourselves with stations in the central areas of cities where the response areas are not involved in jurisdictional overlap.

Essentially, what we did was to view the County as a single fire protection system. Then, applying ISO response distance standards within this system, we counted those stations which would no longer be needed. In this manner we arrived at our estimate that if stations were located systematically in accordance with ISO standards, 48 of the existing 378 stations could be eliminated without a deterioration in service.

To achieve this systematic coverage, however, also requires that 32 existing stations be re-located in order to eliminate all overlapping response areas. The service potential of each station would then be fully realized.

Thus to achieve a net reduction of 48 stations, 80 existing stations actually would be closed and 32 new stations built in other locations.

As we have noted, closing these stations would result in a reduction of from $8.7 to $10.9 million in annual operating costs* and $7.2 million in capital investment and equipment costs. We derived these estimates in the following manner.

The general staffing pattern used by most fire departments in the County, including the Consolidated Fire District, consists of three or four men to an engine company - a captain, an engineer, and one or two firemen. In keeping with prevailing practice, we estimate that a minimum of five battalion chiefs would be required for field supervision of 48 stations. Thus the total manning requirement to operate 48 stations on a 24 hour, 3 platoon basis would amount to a total of 159 to 207 positions.

Using an average of the salary rates reported in the 1971-72 annual survey compiled by the California State Firemen's Association, we estimate that the cost of manpower for 48 single engine company stations would range from $7.9 to $10.1 million. This estimate includes an allowance for fringe benefits and other contingent costs normally encountered in maintaining a constant minimum level of manpower. Adding a nominal allocation of $8,500 for maintenance and operation expense for each station, we estimate the aggregate recurring annual cost of operating 48 stations, not including depreciation and administrative overhead, ranges from $8.7 to $10.9 million.

The average facility replacement cost for a fire station is approximately $150,000. The average land value per station we estimate at $50,000 per parcel. These estimates are based on the recent experience of the County in land acquisition and the construction of fire stations. Thus at a unit cost of $200,000, the total value of facilities and land for 48 fire stations is

approximately $9.6 million today. Not to be overlooked is the fact that fire station construction costs alone have risen 40-59% in the last five years. If this inflationary trend continues, the value of these excess facilities will increase at the rate of nearly $1 million each year.

Each of the excess stations contains at least one piece of heavy apparatus. A fully equipped, triple combination pumper in today's market costs about $50,000. Based upon this unit price the total value of superfluous fire engines now in service amounts to $2.4 million.

However, a reduction in these costs would be partly offset by the additional cost of relocating 32 stations. It is reasonable to assume that the funds realized from the sale of existing locations would approximate the purchase cost of new locations. The stations themselves would have little saleable value. The total cost, therefore, of re-locating and building 32 stations - assuming again an average cost of $150,000 a station - would be approximately $4.8 million. The net reduction in capital investment and equipment costs thus amounts to $7.2 million.

Obviously, a major re-location and construction program of this type could only be accomplished over a period of years - perhaps five years to a decade. It would also require a massive reorganization of the present multi-jurisdictional system of providing fire services. In later chapters of this report we discuss alternatives to the present system which might be expected to achieve savings of this type. It is certain, however, that because of political ramifications, major changes in the present system are bound to take time. Thus the full accomplishment of these savings is not likely to occur in the near future.

Nevertheless it is clear that the present system results in a superfluous number of fire stations and excessive costs. To the degree that this excess can be reduced, by whatever means, there will be corresponding savings.

Slow Response Time

Effective fire fighting requires veil trained personnel, good equipment, an adequate water Supply) and above all a quick response to the alarm. It is well established that the first five minutes of a fire are the most critical. A delay of a few minutes in reporting a fire and in dispatching firemen and equipment to the scene can spell the difference between life and death or between minor damage and full scale loss of property.

In the present jurisdictional system the response to any alarm will be fast as long as there is no question about the agency which should respond. Jurisdictional boundaries are not a problem, for example, if the call goes in through a standard alarm system, or if the person who reports the fire calls the proper fire department directly and gives the correct location of the fire, or if the telephone operator who receives an alarm call does the same thing.

Problems may occur, however) if the person who reports the fire gives misleading or inadequate information to either a fire department or a telephone operator. The Los Angeles metropolitan area, as we have noted, is a complex maze of cities and unincorporated areas. As a result some major boulevards crossing the County in whatever direction pass through as many as 50 different changes of jurisdiction. Often a change will occur within every few blocks.

This is not the only confusing factor. The metropolitan area is also a patchwork of postal zones which encompass or overlap both cities and unincorporated areas, communities which retain their identity long after their absorption into larger political jurisdictions, and telephone exchange areas which overlap all these.

Such a geographical collage taxes the resources of even long time residents when they report a fire. It is quite possible that they may not have intimate knowledge of the limits of their own city, to say nothing of other

jurisdictions. Many people in particular renters who do not receive property tax bills identifying their city - confuse their postal address with their city address.

Under such circumstances, there is a good chance that the person who reports the fire may not know the location by official jurisdiction. Hence, the dispatcher at the fire department or the telephone operator may receive inaccurate or inadequate information. If the dispatcher is given the correct street address or the nearest cross streets, he can identify the location quickly. Any misinformation or lack of information, however, will almost always cause some delay. If the information is seriously inaccurate or deficient the delay will be correspondingly longer. Unfortunately, all too often in the intense excitement which a fire generates, inadequate or misleading information is not unlikely.

But misinformation may not be the only cause of delay. Even after the location of the fire is determined, this location may turn out not to be in the jurisdiction of the department receiving the report. In this case the dispatcher at the receiving fire department must determine which is the responsible fire agency. He takes the location information, satisfies himself of the responsible jurisdiction and calls the dispatcher of that fire department, all of which means a further delay in getting fire apparatus to the fire. By this time the fire may be five to ten minutes old, and the critical time period has elapsed. The original structure may now be a total loss, and the best that the responding engine company can do is to protect the surrounding structures.

One solution which has been advanced to overcome the response problem is the establishment of a single emergency number. Such a number as "911" could be dialed when an emergency occurs anywhere in the metropolitan area. County and city officials have been studying the feasibility of applying this

concept here for years but until recently were unable to develop a program acceptable to all jurisdictions involved.

A computerized system is now being developed which will automatically transmit a "911" call directly to the proper jurisdiction and identify the exact location of the call. Each jurisdiction will then determine the nature of the emergency and dispatch the proper fire, police, or other emergency assistance. County officials estimate that this system will be available for installation in about five years and are currently working with the telephone companies toward this objective.

Certainly, we agree that this project should be pursued intensively, since most of the response problems under the present system would be corrected once such a system is installed. However, anyone experienced in developing complex computer programs is familiar with their unfortunate tendency to slip schedules before they are completely debugged and working as planned. The five year prediction on installation therefore should be treated with some caution. Nevertheless, such a system is certainly to be desired regardless of what other changes may occur in the present system in the meantime.

Bucket Brigade Communications - A Crippling Anachronism

We have described above the delays which can occur in notifying a fire department that an emergency exists. Equally serious is the problem of communication between departments when a major conflagration occurs requiring the services of more than one department. Effective use of available engine companies and special apparatus can be accomplished only if their activities are coordinated in a unified team effort.

Fire fighting units responding to requests for assistance outside of their own jurisdictions must receive specific instructions as to where they are

needed. Capability for maintaining continuous contact with responding units is a critical factor during major emergencies when operational plans are constantly changing to adapt to conditions affecting the direction and intensity of the fire. The original request by the initiating department is normally made by telephone. Once the assisting engine company is on its way the only communication with the requesting agency is by radio.

Unfortunately, in many cases the responding agencies cannot effectively communicate with each other because their radio equipment operates on different frequencies. There are 34 frequencies presently allocated to fire agencies in Los Angeles County. Although some of these frequencies are shared by a number of departments - in several cases as many as 8 to 10 departments - there is no common frequency used by all departments or even a majority of departments. Consequently, the effectiveness of a particular fire fighting effort does not necessarily increase in direct ratio to the added number of men and pieces of equipment brought to the scene.

This communication problem becomes extremely critical when a major brush fire erupts in the area - an emergency which occurs, as every resident knows, with tragic regularity every few years. The last such fire occurred in September, 1970. This catastrophe was actually a series of separate fires caused by prevailing high temperatures, low humidity and Santa Ana winds. One fire swept from Newhall to Malibu; others ravaged communities as far apart as Gorman at the northern border of the County and Palos Verdes in the southern area.

Within four hours of the first alarm the County Fire Department was totally committed, and before the fires were completely contained after five days, 64 other agencies had assisted in the effort. These included the California Disaster Office, the California Division of Forestry, the United States

Forest Service, 38 city departments, and six other County departments in Southern California.

Because of the communication differences it was necessary to assign County personnel with County radio equipment to relay instructions to city unit* when they arrived at the fire scene. It is impossible to estimate the waste of manpower and equipment which resulted from this unavoidable bucket brigade kind of message relay and the impact it had on loss and damage.

A Los Angeles City-County Fire Board of Inquiry was established after these disastrous fires to conduct a study and present findings as to how to deal swiftly and effectively with major fires of this nature. In a summary report, the Board concluded: "There is no question that all of the fire fighting departments and agencies cooperated and worked together. Nevertheless, there is no centralized command with command authority. There are communication difficulties. There are differences in training, approaches and techniques in various departments, causing a lack of real coordination."

In a report to the Board of Supervisors on the fires, Richard Houts, County Forester and Fire Warden, stated that one of the major factors contributing to tactical and strategic problems was the difficulty encountered in radio communications. There is urgent need, he said3 for "a greater radio communication capability to allow fire departments to tie their command level together."

Clearly, the present multi-jurisdictional fire protection system in Los Angeles County is seriously deficient in providing a much needed standard communications system. A major requirement of any rational system of protection would be to provide fire fighting units with similar radio equipment operating on common frequencies.

It would seem that the deficiencies of the present fire service communications system could be corrected by a concerted effort on the part of the County and the cities. Unfortunately, there has been little success it' the past in solving County-wide fire protection problems on a cooperative basis.

The most notable attempt occurred a few years ago when city and County officials formed the Greater Los Angeles Voluntary Intergovernmental Cooperation Committee (GLAVIC). The initial objective of GLAVIC was to find ways for a cooperative approach to such fire service functions as purchasing, training, mutual aid, and communications. The committee was dissolved after two years and three months of unsuccessful effort. The history of GL*VIC is described in Chapter IX.

V. SMALL DEPARTMENTS AND LIMITED RESOURCES

Although fire protection services in the United States have traditionally been provided on a municipal or community basis, the cost and effectiveness of small local fire departments are being seriously questioned with increasing frequency by public officials and fire protection authorities.

Louis Almgren, a nationally recognized authority on fire protection services, has emphasized this point in a number of studies which he has conducted throughout the United States for Case, Babcock & Associates, a private consulting firm specializing in fire protection and safety studies. "Fire department officials," Almgren states, "in many areas are being faced with increased complexity of fire problems requiring more qualified manpower and are finding that the qualified men are too expensive. This factor, combined with a mobile population having less local ties and thus less interest in serving as volunteers than in the past, has led fire department officials to question the continuation of the concept of small local fire defense units." (Study of Fire Department Consolidation in Southern Mann County, prepared by Cage, Babcock & Associates, Inc., Louis E. Almgren, Project Engineer, May, 1971, pp. 88-89)

Commenting on this subject, Raymond Picard, Fire Chief of Huntington Beach, reports that his studies in association with three other fire chiefs in Orange County indicate that approximately $100 million of assessed valuation is required before a community can economically develop an effective fire force. (See p. 77 of this report.) Other authorities, including Louis Almgren, have set the requirement at a somewhat higher level. The figure most commonly used is a city of approximately 100,000 population. Below that level, these authorities say, almost any city will have difficulty marshaling the resources necessary to provide a full complement of fire services at an appropriate cost.

Municipal Fire Administration, the official manual on fire protection services of the International City Managers Association, sets the requirement at an even higher level. "A fire department," the manual states, "must be able to produce four pumper companies and two truck or ladder companies with about 25 men before it can be considered able to handle fires in target hazards such as shopping centers, manufacturing properties, schools and churches. Until a fire department has about 18 companies it cannot handle two substantial working fires and still have some coverage left. consequently, 18 companies is a rough guide to determine when an area has the minimum desirable fire department protection. This requires an on-duty or immediately available, on-call force of 80 men, which in turn, requires a total fire-fighting roster of about 320 men. There are only 100 fire departments of this size in the United States and Canada." (Municipal Fire Administration, 1967, pp. 48-49)

The manual goes on to point out that, "Mutual aid programs, organized and operated with diligence, can and do provide some of the potential protection with available large amounts of necessary fire-fighting equipment and manpower."

There is little question that a well-planned mutual aid program can overcome to a considerable extent the limitations of small unit operation, but these programs even at best also have their limitations and problems - in particular the lack of a clear line of command, adequate staff services, and uniform operating procedures. (In Chapter XI we discuss the effectiveness of these programs in Los Angeles County.)

Therefore, if the authorities we have cited above are reasonably correct, we should expect to find serious operating deficiencies in the present multi-jurisdictional system in Los Angeles County, where many of the departments are of relatively small size. For example, fourteen of the city departments do not meet even the lowest of these size criteria - the $100 million of assessed

valuation. Thirty-seven do hot meet the criteria for 100,000 population. Only the County and two city departments - Long Beach and Los Angeles - meet the requirement set forth in the Municipal Fire Administration manual.

City Size and Insurance Protection Class

The best available measure we have which provides some indication of the adequacy of fire protection services is the insurance protection class assigned to a city by the Insurance Services Office (ISO). As we noted in Chapter III, however, we should understand that the grading schedule used by ISO does not directly measure the quality of performance of a fire department on day-to-day operations. Rather it is a measure of the "relative conflagration potential of municipalities," as Louis Almgren has described it.

Recognizing this distinction, if we examine Exhibit 1, it appears that the conflagration potential of a number of communities in Los Angeles County is relatively high, as measured by the insurance class of both the city and the fire department. Moreover, if we compare insurance class with population, using standard statistical methods, we find that there is a significant relationship between size of a city and the insurance grade assigned to its fire department. The larger the city, the more likely it is to have a good (low) insurance grade.

No city, for example, with a population of 80,000 or more has worse than a Class 3 grade assigned to its fire department. In contrast, ten cities with populations of 60,000 or less have grades ranging from Class 5 to Class 9.

This is a general pattern, of course. As Exhibit 1 indicates, some small cities despite their size have achieved low insurance grades for both their fire department and the city as a whole. Nevertheless, the general pattern in Los Angeles County clearly supports the opinions of the authorities. Smaller city departments, in general, find it considerably more difficult than

do larger cities to provide the resources necessary. to meet the standards established by the ISO grading schedule. Thus in a number of areas in the present multi-jurisdictional system of fire protection, the small unit type of operation has resulted in serious fire protection inadequacies. These inadequacies) as the relatively high insurance grade indicates, are specifically related to the limited resources these communities have available to prevent large and extensive conflagrations.

Fire Prevention

Each year over 12,000 people perish in fires in the United States, and each year the nation suffers a loss of more than $2.7 billion worth of property from this source. Any substantial reduction in these figures depends less on increasing the efficiency of fire fighting agencies than on more effective fire prevention activities. To be effective such a program must include checking plans for new construction of commercial, industrial and multiple dwelling units; schools inspection; convalescent home and hospital inspection; fire drill training for these institutions; flammable liquid and explosives research and control; and arson investigation.

Los Angeles City and Los Angeles County fire departments carry on intensive and well-organized fire prevention programs, as do a number of other city departments. The annual State-wide survey by the California State Fireuien's Association of the wages, hours and staffing of fire departments, however, reveals that in a number of other departments in Los Angeles County, formal fire prevention programs appear to be minimal. (1971-1972 Report, compiled by the Wages and Hours Committee of the California State Firemen's Association, John P. Schmidt, Glendale Fire Department, Chairman.) One city has no personnel regularly assigned to fire inspection and prevention work.

Six cities have only one, and eight have only two full-time positions engaged exclusively in this activity. Moreover, evidence indicates that a gradual erosion of this function is occurring in come cities under the pressure of rising taxes. In recent years several cities have lowered position classification levels assigned to their bureaus and in some the number of positions itself has been reduced.

The absence or paucity of fire prevention staffing is not, of course, prima facie evidence that a city does not recognize the importance of this function or that some measure of such activity is not in fact carried on. Some jurisdictions are making effective use of engine company personnel to conduct periodic inspections of both residential and commercial establishments.

Funding limitations, however, do make it difficult for smaller cities to maintain an adequately trained staff qualified to handle all of the highly technical and professional aspects of a full service fire prevention program.

Training

The efficiency and effectiveness of a fire department depend not so much on the quantity and individual quality of its facilities, equipment, and manpower as it does on how veil-versed its members are in the skills and techniques of the profession, and how well they are trained to apply this knowledge in a team effort under emergency conditions.

A study conducted by the California State Department of Education and the University of California in 1968 found that the training capabilities of an individual fire department are almost directly proportional to its size. (Allen, Bodner, Lano, and Meyer, A Study of the Fireman's Occupation, A Cooperative study by the Bureau of Industrial Education, California State Department of Education, and Division of Vocational Education, University of California, 1968)

Large departments can afford to maintain full scale training programs, staffed with full-time specialists. Los Angeles City, for example, conducts an intensive training program for recruits, consisting of eight weeks of full time training. The program emphasizes manipulative skills in addition to academic study covering all phases of fire protection theory and practice. The formal study program continues after station assignment until the eleventh month of employment at which time the recruit must pass a final written examination.

Interviews by our staff with city officials indicate that there is a wide divergence among the smaller cities in the extent to which they conduct formal training programs. Some cities appear to have excellent program:; in others the programs appear to be decidedly limited. Some cities, for example, conduct training primarily on an on-the-job basis. A new employee may thus receive most of his basic instruction as a working member of an engine company. His progress is dependent upon his own initiative and aptitude, and the teaching proficiency of the engine company personnel who act as his instructors.

Some city departments have overcome their problems by sending new recruits through the training programs of the larger agencies, usually on a contract fee basis. The problem here is that the procedures taught may not always conform to practices used in the sponsoring agency.

In addition, in some areas of the County, city departments have developed recruit training programs in cooperation with the community colleges. Such programs are now in effect at Rio Hondo Comunity College serving the southeastern area cities and at Pasadena City College serving several of the foothill and East San Gabriel valley communities. The problem with such programs is that they are not continuous. They are activated only periodically as sufficient recruits are available. Under these conditions a new fireman can be on the job for weeks before receiving his formal basic training.

In-service training also suffers under a decentralized system. Although several cities have drill towers designed to simulate actual fire conditions for training purposes, few of these are fully operational because space limitations and the proximity of other structures inhibit the use of realistic maneuvers. A few cities have cooperative arrangements to share such facilities. Inglewood, for example, has recently constructed a modern training center to be shared by member city departments of the South Bay Mutual Aid Pact.

There are limitations, however, to the effectiveness of this type of shared training. Differences inevitably develop among the participating cities over such matters as scheduling class times, determining appropriate subject matter, selecting the training staff, and assessing equitable charges for the service.

The State Department of Education also conducts a training program for on-the-job firemen with courses ranging from fire suppression techniques to administrative procedures. In addition, some public utility companies offer lecture and workshop courses in specialized fields concerned with handling emergencies involving gas, electricity, explosives and other chemicals. These courses, however, are limited in their availability. The State Department, for example, employs only one supervisor and eight instructors in its entire statewide program, and 50% of the time of three of these instructors is assigned to other programs.

To summarize, there is a wide divergence among city departments in the extent to which they conduct formal training programs. Our interviews indicate, however, that the budgeting limitations of smaller cities place a severe strain on their ability to assign adequate facilities and specialized manpower to these programs.

VI. THE DISECONOMIES OF COMPARTMENTALIZATION

We noted in Chapter II that there are two quite different fire protection systems operating within Los Angeles County, the independent city system and the consolidated district system. If, however, we look at the 43 fire departments from the point of view of relative size, we get a somewhat different picture. Viewed in this manner, one can say that there are three major fire protection systems operating within the County - the two large single unit systems of Los Angeles City and Los Angeles County and a third many-unit system consisting of the 41 other city departments. Taken collectively the 41 city departments can thus be viewed as a single system which is roughly equivalent in organizational size and number of people employed to the single systems of the City and the County.

Consequently, if we compare these three systems, we should be able to draw some reasonably valid conclusions about their respective operating capabilities. There are differences, of course, which we should keep in mind. Los Angeles City has a greater number of large commercial and government structures than either the 41 cities or the County. The County district area has the least number of such structures. Or* the other hand, the County department has the additional duties of the Forester and Fire Warden function and a large undeveloped area to cover. Allowing for these differences, however, we should still be able to make a meaningful comparison in certain operational areas.

Use of Supervision

If, for example, we compare the ratio of chief officers to subordinate personnel in the three Systems we obtain the following figures. Los Angeles City employs one officer of battalion chief rank or higher for every 37 subordinate

positions. In Los Angeles County the ratio is 1 to 30. In the 41 city departments the ratio is 1 to 15.

Thus, the relative number of high level supervision in the 41 city departments is approximately twice that in the two large departments. It appears, then, that their fragmentation prevents them from making as efficient use of their supervisory personnel as is possible in the two large departments. Regardless of their size, each of the 41 city departments must have a supervisorial hierarchy. There is little opportunity to combine units in order to achieve the most effective use of supervisory personnel.

Dispatch Centers

Since most of the cities operate a dispatch center of some kind, they maintain close to 40 separate dispatch centers. (In a few cases two cities jointly operate a single dispatch center.) In comparison Los Angeles City with a comparable territory to cover operates three dispatch centers with plans for an eventual reduction to one. Los Angeles County with five times the territory to cover maintains four and is planning a reduction to three.

In an effort to alleviate the high cost of the dispatching function, cities have resorted to a variety of staffing methods. In some cases civilians are used exclusively, while in others a combination of firemen and civilians and even student workers may handle this function. In a number of instances, fire and police dispatching is handled by a single agency, the police department. Some departments depend solely on engine company personnel to answer the telephone during the nighttime hours.

While such solutions may reduce to some degree the cost of the dispatching function in a given city, they have little affect on the major cost element involving dispatching in the 41 city system. That is the cost resulting

from a multiplicity of dispatching centers. There is a danger also that some of these solutions may also result in weakening the effectiveness of the total city fire protection program.

Use of Major Pieces of Equipment

The disadvantage of compartmentalized operation is further illustrated if we compare the 41 city departments with the two large departments in their use of major pieces of equipment, such as reserve engines and aerial apparatus.

To meet insurance grading requirements of the Insurance Services Office (ISO), all fire departments must maintain a complement of reserve or back-up engines to replace any on-duty engines that might break down. The ISO standard is one reserve engine for every eight engines in regular service.

The 41 cities now maintain 65 reserve engines in support of 237 engines in regular service, a ratio of one reserve for every 3.6 engines in daily service. In comparison, Los Angeles City maintains 24 reserve engines in support of 153 regular engines, a ratio of 1 to 6.4. In Los Angeles County the figures are 21 reserve to 127 regular, a ratio of 1 to 6.

From these figures one could conclude that the smaller cities are providing a superior level of service because of their lower ratio of reserve to regular engines. Another explanation is that the two large departments are able to maintain a comparable level of service with a higher ratio because they benefit from certain advantages which their large size gives them.

The two large departments, with many more stations to draw on, can move regular equipment from one station to another when the equipment in one station breaks down. They therefore can maintain adequate back-up capability without the need for a heavy complement of reserve engines. In contrast, the small departments, with few stations to draw on, must maintain a heavier

complement of reserve engines, since they cannot depend with certainty on help from neighboring jurisdictions when their regular equipment breaks down.

Similarly, if we look at the problem which the smaller departments face in making effective use of aerial equipment, it is again evident that they operate at a significant disadvantage in comparison with the two large departments. Aerial apparatus (ladder or platform trucks) is required to fight fires in high-rise buildings and other large structures. When large structures are built in the smaller cities, these cities must provide effective protection for these structures in order to meet ISO standards, even though the number of such structures may be few. Thus they are forced to buy aerial equipment - at a minimum cost of $75,000 a unit - although they know that once purchased, this equipment may receive only limited use.

In contrast, the two large departments can locate aerial equipment where it is most needed and can move it with much more freedom through their larger territories as emergencies occur. Because of this mobility they are able to operate their aerial apparatus close to its full potential and with much more effect per unit of equipment than is possible in a small jurisdiction.

Moreover, as more large structures are built, each city will be faced with the decision to buy its first unit of aerial apparatus or more units. Thirteen of the 41 cities, for example, do not yet own this type of equipment. Several cities are facing this decision now - a $75,000 question which no one is anxious to answer. In addition, the decision means a permanent increase in salary costs for personnel to man the new equipment. Thus the price some of these cities are paying for inefficient use of aerial equipment is bound to increase in the future under the present system.

Purchasing Discounts

Purchasing offers a final example of the disadvantage of many-unit operation of the 41 cities in comparison with the two large departments. Although, collectively, the 41 cities purchase equipment in mounts comparable to the City and the County, their individual requirements are small. Hence, they cannot take advantage of volume discounts available to the two large agencies through quantity or bulk purchasing.

For example, purchasing triple combination pumpers in large lots in contrast to the single unit order of a city could conceivably save thousands of dollars. An average price for these units is $50,000. Purchased in lots of 25 or more the total discount may amount to as much as $125,000. Discounts of up to 257. could be realized on smaller items such as hose, ladders, air masks and other equipment common to all departments. The normal engine complement of 1600 feet of 24 inch hose costs about $2700 at list price. Purchased in large quantities the same length of hose costs less than $2400, a unit savings of $300. Since ISO requirements specify that an amount of hose equal to the engine complement must be held in reserve, the savings per engine doubles to $600. Considering the fact that the 41 smaller departments maintain over 300 regular and reserve pumpers in service, this kind of over expenditure assumes significant proportions

There is no apparent reason why cities should not take full advantage of the economies of volume discounts by joining together for the acquisition of equipment and operating supplies, particularly in the purchase of standard stock items. Some compromise, of course, would be necessary where there may be differences of opinion as to the proper specifications for items such as fire apparatus and hose. One would expect, however, that these differences could in most instances be satisfactorily resolved in view of the savings which could be realized by standardizing requirements.

There are, however, few instances where the cooperative approach has been used successfully by city departments to obtain the cost advantages of volume purchasing. As we have already noted in our discussion of communication problems, a few years ago city and County officials formed the Greater Los Angeles Voluntary Intergovernmental Cooperation Committee (GLAVIC) to establish cooperative programs of this type. The initial objective of GLAVIC was to find ways for a cooperative approach to such activities as purchasing, training, mutual aid, and communications. The project was abandoned after two years and three months of unsuccessful effort. The history of GLAVIC is described in Chapter IX.

Thus it appears that in the use of supervision, in the allocation of personnel and facilities for dispatching, in the use of major pieces of equipment, and in the ability to obtain purchasing discounts the compartmentalized operation of the 41 cities places them at a serious disadvantage in comparison to a single large organization of comparable size.

Personnel and Equipment Economies and Salary Rates

On the other hand, officials in independent cities point out that the salary schedules of firemen at all levels in the two larger agencies are with few exceptions higher than those which prevail in the smaller cities. Since personnel costs amount to 907. of a fire department's total costs, these higher rates) they say, more than offset the economies available to the larger organizations in other areas.

It is true that Los Angeles City and Los Angeles County in general pay higher salary rates than many city departments. The differences, however, are not as great as is sometimes assumed. A number of cities pay comparable or in a few instances even higher rates. Los Angeles City, for example, on

July 1, 1972, paid a top rate of $1049 a month for the basic fireman position. Los Angeles County paid $1107 for the same position. The average for 31 cities which reported their rates to the California State Firemen's Association was $1003.

Nevertheless, if we compare the 41 cities with the two large departments using cost of the department per-uniformed employee as a measure, the contention of the city officials appears to have substance. The cost of the Los Angeles City Department per uniformed. employee is currently $25,500. The cost for the Consolidated District is $23,600. The average for the 41 cities is $20,300. (See Exhibit 7.)

In addition, if we examine this cost measure for every department in. the County, using standard correlation analysis, we find that there is a statistically significant relationship between cost per uniformed employee and size of the department. The larger the department, the more likely is it to pay higher salary rates.

As we emphasize throughout this report, however, comparative cost figures on fire departments must be treated with extreme caution. They are affected by t03 many variables which cannot be accurately measured - differences in types of structures to be protected, in terrain, in weather conditions, in level and quality of service provided, and so on. It is impossible to determine, therefore, whether the higher salary rates paid by the larger departments significantly offset the advantages they appear to enjoy through their ability to make more effective use of manpower and equipment.

In the next chapter we discuss further aspects of this cost and performance question.

VII. FIRE DEPARTMENT EXPENDITURES. INSURANCE GRADE, AND CITY SIZE

Many statements have been made by municipal Officials referring to apparent or believed relationships between cost, quality of service, and size of community served. As we pointed out in Chapter V, some officials (and academicians) say that cities smaller than 100,000 or 150,000 population are unable to provide effective or efficient fire service due to limitations of size and ability to pay.

We should also note that many officials also say that there is a point at which a department becomes too large, that large departments become laden with bureaucratic red tape and inefficiency which result in costs that are too high. This chapter looks at the facts for Los Angeles County.

Fire Department Expenditures

Reliable data on individual fire department expenditures is difficult to obtain. The two major references which annually report on municipal finances are the Annual Report of Financial Transactions Concerning Cities of California, published by the State Controller, and the Municipal Year Book, published by the International City Management Association. Because accounting procedures vary among cities, however, the figures on fire department budget allocations generally do not contain all costs which might appropriately be included in the total fire protection budget. Such costs as the city's contribution to the firemen's retirement fund and other fringe benefits are usually included in other budget classifications and may not be included in the published fire department figures.

Therefore, in pursuing our study, we collected data on fire department expenditures directly from the agencies themselves. We collected this

information in April and May of this year. In collecting the data we had the valuable assistance of the Fire Sub-Committee of the Urban Problems Committee of the League of California Cities, Los Angeles County Division.

The information covers the total estimated cost for the current fiscal year, 1971-72. We asked each city to base its estimate either upon its budgetary allocation, if this figure was still reasonably accurate, or upon its actual experience to date, plus an estimate for the last quarter of the fiscal year. We also supplied the city officials with a check list to insure as much as possible that they include all appropriate costs in their estimated total. We believe, therefore, that the cost data that we have assembled is reasonably reliable and is representative of total fire protection costs.

This cost information is presented in Exhibit 6. In column order the table lists the population of each city, the assessed valuation, the per capita assessed valuation, the estimated fire protection cost and the estimated costs per capita, per $100 of assessed valuation, and per uniformed employee. The table also lists the insurance grade of each department.

Regression and Correlation Analysis

Using this cost data, John Campbell and William Larrabee, two systems analysts from Los Angeles Technical Services Corporation, conducted a series of regression and correlation analyses to determine whether or not there are reliable and significant relationships among these cost measures, the insurance grade of the fire department, and city population. Regression analysis tests for whether or not a meaningful relationship exists and specifies the relationship; correlation analysis gives information about how strong the relationship is. The analysis is presented in detail in Appendix B. Here we present a summary discussion of their findings.

The analysis indicates that there is a strong relationship between fire department expenditures and the insurance grade of the department. Regardless of the size of the city, higher expenditures relate to improved (lower) grades. Hence, if we are given the cost data shown in Exhibit 6, we can predict with reasonable accuracy what the grade of the fire department will be, whether the city is small, medium, or large.

The size of the city is related to the grade of its fire department, as we noted in Chapter V. The smaller the city, the more likely it is to have a high (poor) insurance grade. The size of the city is also related to the tax rate or "equivalent tax rate" for fire protection services. (The equivalent tax rate is the cost of the department per $100 assessed valuation.) Smaller cities (less than 80,000) have lover tax rates and correspondingly poorer insurance grades. Somewhat larger cities (80,000 to 150,000) seem to have better grades, but also higher equivalent tax rates. For cities larger than 150,000 a good insurance grade exists along with a leveling off in the equivalent tax rate.

Since there are only three departments it' Los Angeles County which serve populations greater than 250,000, there is insufficient evidence to prove or disprove the contention that very large departments have higher levels of expenditure without the benefit of corresponding improvement in insurance grade. In this regard, however, it should be noted that the two cities within the County with populations over 250,000 and the Consolidated Fire District, which serves a population of 1,895,000--although they differ considerably in their expenditure measures--all have good (low) insurance grades.

Comparison of Three Major Systems

The inconclusiveness of the data on the operation of very large organizations is further substantiated when we compare the 41 city system with Los Angeles City and the Consolidated District as shown in Exhibit 7. Here one of

the two large single unit organizations - the Consolidated District - is shown to be operating at a favorable cost advantage over the average for the 41 cities in two of the coat measures. The other large system - Los Angeles City - is shown to be operating at a cost disadvantage in three measures.

As our analysis indicates, low insurance grades cost money. Thus the Los Angeles fire department with a Class 1 grade - one of the few departments in the United States with this grade - is apparently paying a considerable price for its excellent rating. One should also recognize, however, that among the three systems, LOB Angeles City contains the greatest number of business, highrise and industrial complexes, as well as a substantial mountain and brush area. The department therefore must maintain a highly diversified operation to meet an extremely wide range of fire protection problems, an important factor which undoubtedly also affects the cost of operation.

Reflecting these protection problems, Los Angeles City, for example, maintains a standard pattern of five to six men per engine company in contrast to the three and four men pattern in general use in other city departments and in the County. Thus the operating cost of an engine company in Los Angeles City is substantially greater than that of any other department.

Cost Measures and Cost Effectiveness

Our conclusion is that while the data in Exhibits 6 and 7 provide some interesting comparisons between fire departments and their relative expenditures, one should be careful about interpreting these cost measures in terms of the cost effectiveness of any given fire department.

In Chapter III we pointed out the limitations of the insurance grade as a measure of quality of performance. Here we should emphasize the limitations of these cost measures as valid indicators of economy of performance. As

John Campbell and William Larrabee point out, this data is in highly aggregated form; each of the measures - cost per capita, cost per $100 assessed valuation, and cost per uniformed employee - contain hidden variables, the effects of which cannot be accurately determined. A city, for example, such as El Segundo, with a high assessed valuation, because of its large industrial complex, and a low permanent population, shows a relatively low fire service cost in terms of assessed valuation but a relatively high cost in terms of population.

We cannot determine, either, from this information what effect a number of important operating factors have had on these cost measures. The managerial capability of the fire chief, for example, is bound to have a substantial influence on the cost and effectiveness of a department's operations. The same can be said of a number of other factors - the type of structures in a community and their age, the nature of the terrain, the seasonal weather conditions - by no means the same throughout the County - and so on.

Thus, it is clear, that before we conclude that one department is more or less cost effective than another, we need much more research to develop more accurate measures of departmental performance. Until such measures are developed, we should be extremely careful about drawing general conclusions which are not supported by proven analysis.

Our analysis, however, does show that there is ample evidence that a larger city with a larger fire protection organization will provide improved fire protection service, as measured by grade. Increased expenditures strongly imply improved grades, while low expenditures imply less advantageous grades. On the other hand, the evidence is insufficient to prove or disprove the contention that beyond a certain size a department becomes so burdened with bureaucratic red tape and inefficiency that costs become excessive.

VIII. ALTERNATIVE PIANS FOR ESTABLISHING AN EFFECTIVE FIRE PROTECTION SYSTEM

In previous chapters we have described the many problems which result from a system in which 43 separate fire departments provide fire services to one metropolitan region. The logical question then is: What alternatives are open to cities which may enable them to diminish or eliminate these problems, improve their fire services, and reduce fire protection costs? Our study indicates that there are seven possible alternatives. These are (1) a voluntary association of independent jurisdictions, (2) a county-wide fire protection district mandated by the State, (3) expansion of pre-planned mutual aid programs, (4) inter-city consolidated departments, (5) contract service from another city, (6) contract service from a private firm, and (7) a regional fire protection district with voluntary membership by jurisdiction. In the following chapters we present a detailed examination of the relative merits of these seven alternatives.

We should add one further comment here. We did not examine such departures from conventional organization as the combining of fire and police operations within 9 single department of public safety or the cross-training of policemen to perform fire duties. Some cities have established successful programs of this nature, and while these programs are referred to in several sections of our report, we did not ourselves directly study their operation.

These concepts, it is true, may offer an opportunity to achieve economies in the reduction of administrative overhead and improved use of personnel. However, since they are confined to a single jurisdiction, they do little to overcome the problems of a multi-jurisdictional system of fire services with which this report is principally concerned. Therefore, we have not closely studied these programs and cannot responsibly comment on their relative effectiveness.

IX. VOLUNTARY ASSOCIATION OF INDEPENNENT JURISDICTIONS

Voluntary associations have long been used by government agencies to accomplish common objectives. The League of California Cities, the County Supervisors Association of California and their national counterparts offer familiar examples. Similarly, the cities and the County for many years have maintained detailed disaster and civil defense plans on a cooperative basis through the administration of the Disaster and Civil Defense Commission. On a more controversial note, six counties and 105 cities in the Southern California area belong to SCAG - the Southern California Association of Governments, a voluntary cooperative effort by its umber agencies to consult with each other and exchange information on regional problems and common areas of interest.

A voluntary association, therefore, offers a possible option which should be examined to determine to what extent it could be expected to solve the problems of the present fire protection system.

We could expect, for example, that through cooperative effort an improvement in protection could be achieved by extending formal mutual aid pacts between cities involving pre-planned emergency response, establishing a uniform communications system throughout the County, and combining dispatching functions to reduce the number of separate dispatch centers. We could also expect that the 41 smaller agencies could establish a centralized purchasing bureau to pool their equipment requirements and take advantage of volume discounts. A centralized training center is another possibility.

The major problem with voluntary cooperative associations, however; is that they lack the machinery to enforce agreement among their members. If they attempt to attack serious and controversial problems, they typically

become embroiled in disagreement and tend to degenerate into toothless debating societies incapable of delivering a product, 85 one official has described them. All too often, therefore, such groups are formed, struggle along for a while, and ultimately die for lack of interest and accomplishment.

The Experience of GLAVIC

These are general statements, however, which may or may not apply to a voluntary association of independent fire departments. Fortunately, for our analysis we do not have to depend upon such theoretical arguments for or against a voluntary association. We have instead the much more reliable evidence of actual experience. An attempt to improve fire services through a voluntary association was tried in Los Angeles County only a few years ago. This was GLAVIC - the Greater Los Angeles Voluntary Intergovernmental Cooperation Committee.

GLAVIC was formed in 1962 as the result of a proposal by the Los Angeles City Board of Fire Commissioners to participate with the County in a study of the feasibility of a consolidation of County and municipal fire services. It died two years and three months later, most of its life having been devoted to making sure that none of its objectives or activities would encroach upon the right of any city to selfdetermination. Its demise was as undistinguished as its existence. It merely stopped meeting because of lack of interest by the participants.

Since the CLAVIC experience provides valuable insight into the problems and limitations of a voluntary association, its history deserves exmination in some detail.

The Founding of GLAVIC

In July, 1962, Mr. Fred W. Kline, President of the Board of Fire Commissioners for Los Angeles City, sent a letter to Supervisor Ernest E. Debs which discussed the problem of adequate fire protection in the City and the County. Adequate protection, Kline said, may be impeded by "restriction of emergency services to political boundary lines." The letter concluded with a proposal that the Board of Supervisors designate "a committee to work with representatives of Los Angeles City to study this problem with a view to possible consolidation of County and municipal fire services in due and proper time."

The letter was made public a few days later. In a prominently headlined story the Los Angeles Times reported, "First steps toward a possible consolidation of all fire departments in the County will be considered by the Board of Supervisors at its Tuesday meeting."

When the Board met on the following Tuesday, mayors, councilmen, and fire chiefs from the smaller cities attended in force to protest such a study and to voice their opposition to the elimination of their independent fire departments. Reacting to this opposition, the Board of Supervisors asked their Chief Administrative Officer to conduct a study of the matter and to contact the Los Angeles City Council to see if they concurred that a committee should be created "to study closer cooperation of certain fire fighting departments with the County and Los Angeles City." The City Council in turn referred the matter to their Chief Administrative Officer for study.

Nine months later, on the basis of a report by the City CAO, the City Council proposed that the Board of Supervisors "be requested to cooperate with the Mayor and the City Council in the establishment of a voluntary

intergovernmental cooperation committee for the purpose of achieving improved fire protection services." The committee was to be composed of the mayor or a councilman from each participating city and a member of the Board of Supervisors, membership to be open to all cities in the County. The Board of Supervisors agreed to the proposal and so GLAVIC was born.

At the invitation of Mayor Yorty the first meeting to establish the plans and program for GLAVIC was held on August 21, 1963. Thirty-eight representatives from 23 of the County's 74 cities and one supervisor representing the County attended the meeting. At this meeting a steering committee was appointed to outline the purposes of GLAVIC and to prepare the by-laws to govern its operation. A nominating committee was also appointed to nominate a permanent chairman and secretary.

The steering committee, meeting during the following month, adopted a tentative set of by-laws which stated that the objective of GLAVIC was "to identify intergovernmental problems and to develop workable 5olutions acceptable to its members," including "problems of area-wide or regional impact or that extend across political boundaries." It was also to "provide for cooperation between its member agencies in carrying out approved plans and programs which do not interfere with, or infringe upon, existing agreements, e.g., mutual aid."

The proposed by-laws were sent to each city in Los Angeles County for their information and comment. Accompanying the by-laws was a questionnaire prepared by the steering committee which asked each city council if it was in favor of establishing GLAVIC. Of the 74 cities receiving the questionnaire, 22 indicated they favored the establishment of the committee, 15 were opposed to it, 12 took no action, 11 were undecided, and 14 did not respond.

The Reorganization of GLAVIC

Recognizing not only the lack of a consensus among the cities but the unwieldiness of a 74 member committee, the Board of Directors of the League of California Cities (Los Angeles County Division) proposed at a meeting in December, 1963, the establishment of a five-man committee as a substitute for the original GLAVIC. This reconstituted *LAVIC would be composed of one elected official from Los Angeles City, one member of the Board of Supervisors, and three elected city officials appointed by the League to represent all other cities in the County.

The proposal was approved by the Los Angeles City Council and the Board of Supervisors, and the first meeting of the new CLAVIC was held on January 30, 1964. At this meeting it was agreed that four technical subcommittees would be established to study four problem areas which had been outlined in the original Los Angeles City proposal. These were communications, mutual aid, training and purchasing. Chairmen of the four subcommittees were appointed and instructed to have their subcommittee members selected and the scope of their work determined by the next meeting.

A second meeting was held on April 2, 1964, to confirm subcommittee membership appointments and to discuss subcommittee assignments.

The End of CLAVIC

The last recorded meeting of CLAVIC was held on October 29, 1964, to review the progress of the subcommittee studies. No one from the purchasing subcommittee attended the meeting, and consequently no report of its progress was made. The chairmen of the mutual aid and communications subcommittees reported that they were continuing their studies, but made no formal recommendations. The training subcommittee submitted a report recommending that the cities and the County enter into a joint venture to construct and operate a

central training facility to be located in Bouquet Canyon on a 200 acre tract owned by the City of Los Angeles.

There is no evidence of any further activity of GLAVIC, and nothing was done about the recommendation of the training subcommittee. One of the major declarations contained in the proposed by-laws for GLAVIC stated, "Constructive and workable policies and programs for providing more effective and economic governmental services can be most expeditiously and realistically developed through voluntary cooperation of elected city and County officials in a committee dedicated to this purpose." The fact is GLAVIC demonstrated exactly the opposite.

Conclusion

Unless one concludes that the city and County officials involved in GLAVIC were thorough incompetents - a conclusion that the record does not support - then it seems clear that a voluntary association will not provide an effective solution to the problems in the present fire protection system. Some improvement perhaps could be achieved in mutual aid, training, and communications, but a voluntary association would do little to reduce or eliminate most of the major problems in the present system - superfluous stations, slow response time, small departments and limited resources, inefficient use of personnel and equipment, and so on.

We cannot, therefore, recommend the alternative of a voluntary association. There is no need to repeat the waste of time, effort, and expense of another GLAVIC.

X. STATE MANDATED COUNTY-WIDE FIRE PROTECTION DISTRICT

In direct contrast to the voluntary approach exemplified by CLAVIC is the alternative of a State mandated district. This would require State legislation assigning responsibility for fire protection services to a special district whose boundaries would be co-terminous to those of the County. This legislation would be similar to that which established the Air Pollution Control District in 1948.

Although such legislation would not necessarily prohibit cities from operating their own fire departments, it would for all practical purposes deny them this privilege. Cities which continued to maintain their own departments would not only duplicate the responsibility of the district, but their citizens would have to pay the tax levy for the district operation as well as the cost of their own department. Under these circumstances, obviously few cities would be willing to pay this double cost.

Such legislation would need to be carefully prepared to Insure that all details necessary for an orderly transition to a single district system would be covered. Sections of the bill, for exmple, would need to cover such details as the composition of the governing board of the district, its basic operating policies and procedures, and the manner in which the personnel and assets of the present city and district fire departments would be transferred to and assigned within the new district. We have not pursued this subject further, however, since we reject this alternative for reasons explained below. Nevertheless, as a matter of information, some general comments should be made about this approach.

Operation of the District

The loss by the cities of their own fire departments would not necessarily mean that city officials would have nothing to say about the quality of fire protection in their respective communities or be denied all control over the cost of this service. Properly constituted, a mandated system should provide for representation of Incorporated areas on the governing body of the district. For example, the governing body could consist of four representatives elected by city officials and the five members of the Board of Supervisors. This or a similar plan of representation on the governing body would give the cities a significant measure of control over the cost and level of service provided to their areas. It would also assure that appropriate attention would be given to the specific needs and conditions which might exist In their particular areas.

Our previous analysis indicates that such a county-wide district should have significant operating advantages over the present multi-jurisdictional system. As we have seen, many of the problems inherent in the present system result directly from the maze of jurisdictional boundaries and the fragmentation of fire services among 43 separate agencies. A single district operation would immediately enable the district management to initiate a long-range program to eliminate the many fire stations whose response areas overlap. It would enable district management to reduce supervisorial positions, consolidate administrative and auxiliary functions, and take advantage of the economies of size in the purchase and use of equipment. Properly managed, therefore, a single district operation should correct many of the problems which now plague the present system and which cause excessive costs and inefficiency.

Conclusion

Despite these advantages, however, we cannot recommend a State mandated system as an appropriate alternative to the present system. It would set a precedent of control by the State which could eventually deny the cities their major reason for being cities - that is the right to control and determine the level of those governmental services which have traditionally been considered a function and responsibility of local government.

We believe, therefore, that the decision to change the method by which these services are provided should be made at the local level by the people who are directly affected by that decision. If the citizens of any community wish to maintain their own fire department, this is their decision to make. It is their lives and property which are at stake, and it is their taxes which pay for the fire protection.

We do not, therefore, recommend a State mandated district as a suitable solution to the complex problems of fire protection in Los Angeles County.

XI. EXPANSICION OF PRE-PLANNED MUTUAL AID PROGRAMS

Fire departments throughout Los Angeles County all participate in some form of mutual aid program. The principal purpose of mutual aid agreements among departments is to provide a system of aid to each other when the equipment of one department is unable to cope with a major emergency or multiple emergencies. It is thus primarily a device designed to overcome the disadvantages and limitations of small unit operation.

Limitations of Mutual Aid Agreements

Some of these agreements are formal; others are merely understandings. With little exception, however, they are limited in the degree of commitment on the part of the participating agencies. The agencies themselves recognize these limitations, since, as we have noted, they tend to locate their fire stations in response to their own needs, even though a station in another jurisdiction may be only a few blocks away across a boundary line. Response by the agency called upon is subject to the availability of men and equipment which at the moment may be involved in an emergency response in its own community.

There is often a critical loss of time under most mutual assistance programs. The use of auxiliary forces is not automatic. There is a built-in delay factor, since before calling for help, the responsible department must first assess the seriousness of an emergency and its own ability to handle it. Only after it determines that it cannot handle the incident alone, does it send in the request for help. Local pride often makes this a difficult decision. Delays of up to an hour in the arrival of auxiliary forces are not unusual under these circumstances. (For an excellent discussion of the advantages, as well as the problems and limitations of mutual aid programs, see Municipal Fire Administration, 1967, pp. 47-53.)

Formal Mutual Aid Pacts with Pre-Planned or Automatic Response Patterns

To overcome some of the deficiencies experienced under the mutual aid arrangements described above, some cities have instituted formal mutual aid pacts with pre-planned response patterns which become operative once a participating agency determines that help is required. The organization and operation of two of these pacts, the Southeast Cities Mutual Aid Fire Pact and the South Bay Mutual Aid Pact, are described in detail in Appendix A.

To their credit these mutual aid pacts provide an improved measure of protection beyond that of other mutual assistance agreements in general use throughout the County. The principal advantage is that there is an agreed upon operational plan based upon sound fire suppression standards which gives reasonable assurance of an appropriate buildup of available strength once the plan has been put into motion.

Going beyond these two pacts, the cities of Claremont and Pomona initiated an agreement in 1969 which provides for automatic first alarm response by either department to specified contiguous areas regardless of jurisdiction. The agreement delineates the areas in each city to which the other department will automatically dispatch an engine company in the event of an emergency. Under this agreement Pomona also furnishes all dispatching and emergency communication services to Claremont on a cost sharing basis.

There is no doubt that formal mutual aid programs of this kind add protective capability in meeting major emergencies. To a degree they ameliorate a number of the problems in the present County-wide fire protection system which we have discussed in preceding chapters. They reduce delays in response time due to the confusing patchwork of jurisdictions; they reduce or eliminate communications problems; and they upgrade the level of service provided. In time they may also enable the concerned agencies to close some stations which they now operate or reduce the need to build new ones.

Problems of pre-planned Mutual Aid Programs

Although we believe that the extension of mutual aid programs Should be encouraged, we must however point out same of the shortcomings of this approach.

First, problems are encountered when one attempts to establish an equitable mutual aid program between large and small departments. Los Angeles City and Los Angeles County, for example, are reluctant to enter into mutual aid agreements with smaller agencies which involve pre-planned first alarm response. This reluctance does not reflect an unwillingness to lend assistance to any other fire department. Rather it is based upon the premise that there would be little equity in a reciprocal agreement between a large department with almost unlimited resources and a small city department with only one or two engine companies on duty. One-engine company departments, in particular, could give no guarantee that they would respond on first alarm outside of their own jurisdiction. To do so would be to risk leaving their city unprotected in the event that an emergency occurred at the same time within their own boundaries.

This problem, moreover, is not confined to agreements between large and small agencies. It can exist in any mutual aid program involving mall departments. Small departments simply cannot give full assurance that they will be able to help other departments whenever assistance is required.

Aside from this very practical reason for not entering into formal first-alarm response agreements, the two large departments are of the opinion that such agreements would encourage smaller jurisdictions to reduce their own fire fighting forces, or maintain them on a limited level, in the assurance that they can count on the immediate assistance of the larger agencies. Thus preprogrammed, first alarm, mutual aid systems, according to Los Angeles City and County officials, tend to create one sided relationships which result in the subsidization of the smaller departments by the larger agencies.

For these reasons Los Angeles City has only two written agreements involving reciprocal cooperative response with another fire protection agency. Both of these are with the County Fire Department. One is concerned with initial action on brush fires. This is a memorandum of understanding which calls for immediate response by the department receiving a report of a fire along or near City-County boundaries within specifically designated brush and grass covered areas. The other is a general agreement which provides for response by either department when assistance is requested by the other.

Although Los Angeles City has no written mutual aid agreement. with other cities, the policy of the department is to respond to an emergency outside its jurisdiction whenever assistance is requested, provided the assistance does not endanger its own protection requirements.

Los Angeles County has written mutual assistance agreements with all city departments in the County similar to the general agreement it has with Los Angeles City. These agreements provide for assistance when requested, but not on an automatic, first alarm basis. Thus the policy of the two large departments is essentially the same. They will provide assistance when requested, but will not enter into day-to-day agreements involving pre-planned or automatic response patterns.

Another limitation of first alarm, mutual aid agreements is that the insurance grading schedule gives only partial credit for the fire fighting forces of neighboring jurisdictions participating in the agreement. This policy is based on the reasoning that these forces may not always be available when their assistance is required. Therefore, a city must be careful in attempting to take advantage of its mutual aid agreements by reducing its own fire fighting forces. If it does so, it risks receiving a poorer fire protection classification and a consequent increase in insurance premiums for its residents.

Finally, even if automatic, pre-planned mutual aid agreements could be expanded throughout the County, this alternative would still fall considerably short of providing the cost and service benefits which our study indicates can be realized by other alternatives to the present system.

Conclusion

Mutual aid, we believe, is a step in the right direction, but it is a limited step. It does not effectively attack the major problems of the present multi-jurisdictional system, in particular the problems which result from a multitude of small departments with limited resources and a variety of operating methods and procedures.

The basic question which mutual aid programs raise is: If a little consolidation is good, would not more consolidation be better? We attempt to answer that question in the following chapters of this report.

XII. INTER-CITY CONSOLIDATED DEPARTMENTS

A fourth alternative open to cities confronted with the mounting cost of maintaining their own fire department is the establishment by two or more cities of a consolidated inter-city fire department. Under present State legislation the participating cities can establish such a consolidated department either under a joint powers authority or through the establishment of a special fire protection district whose boundaries would be co-terminous with the boundaries of the member cities.

The power to establish a joint powers authority is given to cities under Section 6502 of the State Government Code which states that "two or more public agencies by agreement may jointly exercise any power common to the contracting parties." The power to establish a special district is given to cities under the State Fire Protection District Act of 1961, which governs the operation of the Los Angeles Consolidated Fire Protection District and all other special fire protection districts established in the State.

Under an authority the city councils of the participating cities appoint a commission to act as the governing body of the authority. Generally this commission will consist of five to seven members appointed from among the city council members themselves or their city managers. Under a district the commission may be appointed in the same manner; however, the Act also allows the members to be elected directly by the voters in the district, if the participating agencies prefer this method of selection. Under a joint powers authority, the participating cities may change the composition or size of the governing commission simply by a vote of the city councils. Under a district system, the size, composition, and manner of selection of the commission is determined when the district is established and cannot be changed thereafter, except by an

amendment to the Fire Protection District Act. This authority to change the composition of the commission narks the principal difference between the two legal approaches. Most likely the greater flexibility and control which the authority gives to the city councils would make this approach the more attractive to most city councils.

Studies and Implementation of Inter-City Consolidation

Although inter-city consolidation has not yet been tried in Los Angeles County, studies of this approach are currently being conducted in three different areas of the County. In addition, two consolidations, one using an authority and the other a district system, have been implemented in Orange and Contra Costa Counties. Thus this device is generating considerable interest as well as activity as an alternative to single-city operation. What then are the results of these Studies and implementations? Can we draw any conclusions from these results about the potential of inter-city consolidation as an effective means of reducing fire protection costs and/or improving fire service? The remainder of this section is devoted to a detailed review of these results with the purpose of answering these questions.

The Study in Santa Fe Springs and Whittier

In February, 1971, in a carefully detailed report, Fire Chiefs B. J. Thompson of Santa Fe Springs and Rod Smith of Whittier submitted a proposal to their respective city managers for the consolidation of their two fire departments. (B. 3. Thompson and Rod Smith, Proposed Reduction of Fire Protection Costs through Joint Fire Operations, February 9, 1971.) The two chiefs proposed a three-phase program in which the two departments would be consolidated in stages over a period of three to four years.

In the first phase communications and training would be merged, with one communications center and one training center, each under a single supervisor, providing services to both cities. Response assignments for all fire fighting companies would also be consolidated so that the closest equipment would always respond to the emergency regardless of jurisdiction. The two cities would thus be treated as if they were one.

In the second phase the fire prevention program would be consolidated under the single direction of a Whittier Fire Marshal using a computerized information system developed in Santa Fe Springs. In the third phase a single administrative section would be established under a joint powers authority between the two cities. This legal step would be necessary to satisfy the Fire Underwriters so proper credit would be received and to give authority to the chief officers over the consolidated operations.

Under the completed program the two chiefs would continue in their present positions directing the consolidated department on a joint basis. During fires and other emergencies, however, one of the officers would act as chief and the other as assistant chief. If the emergency occurred in Santa Fe Springs, the Whittier Fire Chief would perform the duties of assistant chief; if the emergency occurred in Whittier, their roles would be exchanged. Thus the usual position of assistant chief would not be required in the consolidated department.

Chiefs Smith and Thompson estimate that this consolidation program when completed would result in a total reduction in personnel of 21 employees - 13 firemen, 4 dispatchers, and 4 battalion chiefs. Since the chiefs do not advocate discharging present employees, the reductions would be accomplished through transfers, resignations, and retirements over a period of three to five years. The two departments together now employ 153 uniform and non-uniform personnel. The reduction thus amounts to 13.7% of the present force.

Offsetting some of the savings resulting from reduction in personnel would be the cost of salary increases required to bring salaries into parity between the two departments. Currently, Santa Fe Springs Fire Department employees at all levels are paid more than their counterparts in Whittier. Adjusting for this cost, the two chiefs estimate that the total net savings from consolidation over a period of ten years would mount to $1,370,000 for Whittier and $580,000 for Santa Fe Springs.

At the same time, according to the projections in their report the overall fire protection resources available to each city would be substantially improved. The two chiefs estimate that two months would be required for changeover to the first phase of the program, should their respective city managers and city councils approve their proposal.

No action, however, has yet been taken on this report by either city manager or city council. At the time the report was submitted in February, 1971, the Whittier city council, on the recommendation of its city manger, Mr. Keith Abbott, had also requested a study by the Consolidated Fire District on the advantages of annexation to the district. The Whittier officials had taken this action as the result of a petition by a group of their own firemen who favored annexation to the district.

The district report was delivered to Whittier in September and presented to the Whittier City Council on October 5 with an accompanying analysis by Mr. Abbott. The district report estimated that Whittier would save $222,000 annually by joining the district. Abbott, however, pointed out in his analysis, that the district's estimate of savings was based on the 1970-71 district tax rate of 65 cents per $100 of assessed valuation, not on the 1971-72 rate of 74.99 cents. (This increase of nearly 10 cents in the district tax rate is the largest increase in a single year in the history of the district. Comments

by district and independent city officials on this increase and the committee's own discussion of the subject are presented in later sections of this report.)

The tax rate increase, Abbott said, would increase the cost of district services by $112,000 annually. In addition, the city would have to continue paying for the cost of two other services - a public ambulance service and a street alarm system - services which the city department now provides but which the district would not. As a result, Abbott concluded, annexation to the district would slightly increase the total cost of fire service to the City of Whittier rather than reduce it.

Abbott also pointed out two other alternatives to the current method of providing fire protection service in Whittier - cross-training of patrolmen and firemen in the Police and Fire Departments, and creating a new department of Public Safety utilizing personnel in both Police and Fire Departments. He therefore recommended that no action be taken until he could conduct in depth studies of each of these proposals. The City Council approved the recommendation.

Regardless of what final decision Whittier and Santa Fe Springs may make, we believe Chiefs Smith and Thompson are to be commended for their study. It is a carefully prepared and convincing presentation of the cost and service advantages which may be achieved through establishment of an inter-city consolidated fire department.

The Study in the Pomona Valley

The second exploratory study of consolidation and other methods of better utilizing manpower and equipment in this area was initiated in April, 1971, by a committee of city managers and fire chiefs from seven cities in

Pomona Valley - Claremont, La Verne, and Pomona in Los Angeles County, and Chino, Montclair, Ontario and Upland in San Bernardino County. This group outlined a three-phase plan possibly leading to a single consolidated department operating under a joint powers authority and headed by a single fire chief. Detailed cost estimates have yet to be developed, but the proponents of the plan believe the consolidation would result in the closing of one station, the reduction of total fire fighting forces by one engine company, and minimal additions of stations in the future. The program would also substantially improve the service levels and resources currently available in some of the cities.

Further development of the total eventual plan, however, was act back somewhat when the Pomona City Council in August, 1971, voted to withdraw from the study. The other cities decided to continue their study and were joined by two fire protection districts. Alta Loma and Cucamonga.

Over the past twenty years Pomona has devoted substantial sums to a systematic effort to improve its insurance protection class. In this campaign, Pomona has expanded and increased the capacity of its water system, improved its communication and alarm system, and significantly upgraded the general level of its services. As a result, both the city and the fire department have a Class 2 grading. In 1949, the grading was Class 9. The Pomona City Council therefore feels that it has little to gain from consolidation. Furthermore, Pomona's excellent insurance grading could be endangered by a merger with cities whose protection services are considerably weaker than Pomona's.

On November 30, 1971, the study recommended that an initial program of centralized dispatching be established between three cities (Ontario, Montclair and Upland) and the two fire protection districts. Other cities may join later. This phase is expected to be implemented by July 1, 1972.

The Study in the South Bay Area

A third study of inter-city consolidation vas recently initiated in the South Bay Area by Fire Chief Robert R. Lucas of the city of Torrance. As we noted in Chapter XI, nine cities in this area have long operated a formal mutual aid pact which prescribes in detail the action each city will take when a member city requests assistance. The cities belonging to the pact are El Segundo, Gardena, Hawthorne Hermosa Beach, Inglewood, Manhattan Beach, Palos Verdes Estates, Redondo Beach, and Torrance.

With the approval of the fire chiefs in the other eight cities, Chief Lucas has assigned two members of his department to conduct a preliminary study of the possible advantages of further consolidation. The first phase of the study will cover the differences in operation and cost of service among the fire departments, the differences in assessed valuation and fire protection requirements among the cities, and the advantages, disadvantages and problems of further consolidation. Since the study is just beginning, no findings or conclusions have as yet been reported.

The Value of Actual Experience

The possible cost and service advantages of inter-city consolidation is thus generating considerable interest and study in Los Angeles County, but with as yet no actual implementation. Without results based upon actual experience, it is difficult to assess the true potential of any alternative. One can argue that studies of this type tend to be optimistic in their projections, although the estimate of savings and improved service in the Whittier-Santa Fe Springs study appears to be soundly based on current facts and realistic workloads. It is of particular value, therefore, that we do have available the results of two actual consolidations which have occurred in Orange and Contra Costa Counties.

Consolidation in Orange Count

Early in 1968 four cities in Orange County - Fountain Valley) Huntington Beach, Seal Beach, and Westminster - entered into a joint powers agreement to consolidate their dispatching operations and their station response patterns. The program was developed by the fire chiefs of the four cities. A report on the progress of the program was presented to the annual conference of the League of California Cities in September, 1971, by Fire Chief Raymond C. Picard of Huntington Beach. (Raymond C. Picard, Can a Fire Department Become Cost Effective? The Joint Powers Approach, September 28, 1971.)

In developing their plan the chiefs conducted a statistical analysis which showed that approximately $100 million of assessed valuation is required before a community can economically develop an on duty, fully paid, fire combat team. According to Chief Picard, the four cities now operate a single communications and dispatching center in Huntington Beach. Each city also has a predetermined fire equipment response for a three-alarm assignment of six engines, three truck companies, and three chief officers, a response which none of the cities could afford to develop on its own. The dispatch center now handles an area of 60 square miles and a population of 250,000. The system is programmed to handle a future population of 500,000.

As the next phase of the program the four cities have tentatively agreed to combine their training and fire suppression operations. Each city will still retain its authority, autonomy, code enforcement and fire prevention, but the high expenditure items of fire combat, training and communication have been programmed for the most cost effective approach. Besides centralized communications and training centers, city boundary lines will be eliminated for all fire responses. The nearest company to the

fire will respond regardless of jurisdiction. Present plans call for this phase to be in full operation by March of 1973.

Cost of the combined operations is allocated to the cities by a simple formula - population in thousands plus assessed valuation in millions, computed to a percentage. The assessed valuation relates to what there is to burn and the population relates to the fact that people cause fires and are in need of services. "The whole process," Chief Picard reports, "is arbitrary, but has proven to be an excellent method of securing agreement."

Summarizing past results of this project and future plans, the fire chiefs of the four cities stated in a report to their city managers (April, 1971):

"If the four cities operated separately the total fire defense requirement would be eighteen fire stations and engine companies and eight ladder companies. Our fire defense analysis indicates that by operating collectively through a joint power agreement the new total revised requirement is fourteen fire stations and engine companies and six ladder companies. This represents a future cost savings to the four cities of over one million dollars per year.

"This unique proposal represents a continued effort by the respective city Fire Chiefs to further consolidate and increase functional fire protection services at lower costs without relinquishing local autonomy."

This theme of local control is strongly emphasized by the proponents of inter-city consolidation as one of its principal advantages. While each city council gives up undivided control over the combined operations, each still maintains a strong share of control through its representation on the governing commission of the joint powers authority. In the Orange County case, the city managers of the four cities serve as the members of the governing commission.

Consolidation in Contra Costa County

A second example of the consolidation of several small departments into a single larger department was initiated in a section of Contra Costa County in *964. Before 1964 fire services in this area were provided by five

small fire districts and the City of Martinez, which had its own department. The largest department operated five stations and the Smallest one station. While this consolidation was not strictly an inter-city consolidation, we present it here as an example of such consolidation since it involves small fire departments similar in size to many city departments in Los Angeles County. The significant point is not the difference in the governing agencies involved but the fact that six small fire departments were combined into one larger department.

Attempts to consolidate these departments had been studied and proposed as early as 1935, but these proposals had been defeated through the opposition of fire chiefs, elected officials, and union representatives. In 1964, however, two districts were merged as one district, and in 1966 a third small district joined the system. In 1968 the City of Martinez annexed to the district by a vote of the people, and in 1969 the two remaining districts were annexed.

The district department now consists of 18 stations, 240 paid employees and 70 reserve firemen, all under the direction of a single fire chief. The Board of Supervisors of Contra Costa County serves as the official governing board of the district. However, a board of five fire commissioners, appointed by the supervisors and acting as their representatives, overlooks the day-to-day operation of the district. Four members of this board are appointed on the recommendation of the four largest cities in the district, and the fifth is appointed from the unincorporated area.

In a paper presented to the 74th annual meeting of the National Fire Prevention Association in 1970, Fire Chief A. V. Streuli listed in detail the benefits which he believes have been gained through the consolidation. (A. V. Streuli, Consolidation of Fire Districts, May, 1970) Since the presentation of this report

the Briones Fire Protection District joined the system in November, 1971. It is a small district with a one-station volunteer department.

Prior to consolidation, Chief Streuli reports, tables of organization called for a total of 16 chief officers in the separate departments. Twelve are carried in the present organization. Three fire marshal positions and three fire alarm operator positions have also been phased out.

Independently, each department carried several reserve pumpers and specialized apparatus. Overhead cost on this equipment was considerable. Only four pumpers are required for the consolidated district, and fever four-wheel drive apparatus.

Because of the larger resources to draw from, first alarm response has been increased by 3O*. Truck service has been extended to all parts of the district, many of which had no truck response at all unless called for by mutual aid. In addition, back-up strength on additional alarms is now programmed to a degree that was not possible under independent operations.

Artificial and unrealistic political boundaries caused 6 and 7 minute runs that could have been made in 2 minutes by another department. Now, Chief Streuli reports, all first alarm responses come from the 3 nearest stations.

Prior to consolidation, the only full time specialists were fire prevention inspectors. All other staff functions were handled by line personnel on a part-time basis. After consolidation, it was possible to assign personnel to the functions of Plans Check, Arson Investigation, Permits, Weed Abatement, Public Relations and Records, Training Officer, and Master Mechanic.

Under the capital improvement program the district has constructed a new fire alarm center, a new consolidated repair shop, and a new centrally located hose tower. A million dollar "Fire College" has also been planned and is now nearing completion.

Prior to consolidation, there were no designed training facilities. They were simply too costly for the independent departments to construct. Efforts at training varied among the departments from none to whatever program a part-time training officer could develop with no facilities. "Recruits were put on the back of an engine," the report states, "told to hang on tight and to keep out of the way." With the appointment of a full-time training officer, it was possible to institute a fully developed training program built around "AIA Special Interest Bulletin No. 234."

The two districts initially consolidated enjoyed Class 3 dwelling rates in Fire Zones 1, 2, and 3. Later annexing departments had a best rate of either Class 4 or 6. Upon annexation, all immediately received a blanket reduction to Consolidated's Class 3. When multiplied by the total number of residences in the District, Chief Streuli states, this savings amounted to thousands of dollars to the citizens.

In 1964, when the first two districts were merged, the tax rate for the Consolidated District was $0.872 per $100 assessed valuation. In 1971 it was $0.724, a decrease of 16.97%. Moreover, except for the two small districts which had volunteer departments, the tax rate of the other agencies at the time they joined the Consolidated District ranged from $0.734 to $1.30, all higher than the district tax rate is today. This reduction was accomplished, Chief Streuli reports, despite the very ambitious capital improvement program, amounting annually to approximately 107. of the district budget.

The experience of Contra Costa County, we believe, is particularly significant when we consider that among the 42 city fire departments in Los Angeles County, 34 contain less than 100 employees and operate fewer than five stations. They are thus comparable in size to the six small departments which operated in Contra Costa County before they were consolidated. We believe that

the experience in Orange and Contra Costa Counties indicates that many of these cities could expect to achieve a substantial reduction in costs and an improvement in service through inter-city consolidation, either under a Joint powers authority as in Orange County or a special fire district as in Contra Costa County.

Problems of Inter-City Consolidation

It is true that serious problems may have to be overcome before a successful and effective consolidation can be accomplished. The experience of the Pomona valley cities provides an illustration of otie such problem. When one or two of the cities involved in the consolidation currently provide a higher level of service than other cities, it may be difficult to develop a formula for pooling resources and allocating costs which is acceptable to all the cities. It may also be difficult to effect the consolidation without endangering the insurance grading of the higher service cities.

There will also be problems over differences in operating methods, training procedures, and types of equipment used in the departments to be merged. More serious, perhaps, are the problems involving personnel - differences in salaries and classifications, in hours and work schedules, in vacation and sick leave, and in the whole category of fringe benefits.

Differences in retirement programs, in particular, may create a serious cost problem for some of the cities involved. While most cities operate under the Public Employee Retirement System, some cities provide additional benefits for their public safety employees under an optional section of the plan, commonly called The California Highway Patrol Plan. This CHP plan provides benefits to safety members which are comparable to those provided to County public employees under the County Retirement Act of 1937. When a city adopts the CHP plan

it must pay all benefits the employee would have accumulated since the time of his entry into service, including all contributions which would have been paid by the employee. Thus any city adopting the CHP plan will incur a substantial initial expense and will be committed to an increased continuing cost. City officials estimate that in most cases the CHP plan will increase the city's retirement costs for firemen by 40-50 percent. Thus any group of cities planning to establish a consolidated department will incur significant costs if one of the members has this plan and the others do not.

This problem, however, may be resolved by legislative action in the near future. A bill to make the CHP plan mandatory for public safety employees in all local agencies was passed by the legislature last year, but was vetoed by the Governor. Several bills of a similar nature have been introduced again this year.

These are technical problems, however, which almost certainly can be solved if the concerned officials are dedicated to solving them. More difficult to overcome perhaps are the political obstacles - in particular the opposition of fire chiefs and city officials who are naturally reluctant to see their status changed or to give up undivided control over their own department.

Conclusion

Until recently the pressure of increasing municipal costs has not been sufficiently severe to overcome this opposition. With the increasing strain on city finances, however, the atmosphere appears to be changing. To match expenditures with revenues city officials must either reduce expenditures or increase revenues - and increasing revenues through higher taxes is becoming an increasingly unpopular and politically dangerous action.

We believe the evidence we have presented indicates that inter-city consolidation may offer some cities which now operate their own departments an

opportunity to reduce costs and at the same time improve service. Whether it is a better alternative than other alternatives we discuss in the next chapters of this report, we cannot say. The answer to that question can only be resolved by each city itself through an individual study of these alternatives in relation to the particular circumstances which affect the provision of fire services in that city.

XIII CONTRACT SERVICE FROM ANOTHER CITY

Section 6502 of the State Government Code which enables two or more public agencies to establish a joint powers authority also enables one public agency to contract for a government service from any other public agency. In 1954 Lakewood incorporated and, taking advantage of this legislation, contracted with the County for the bulk of its municipal services. Since then the contract concept has developed to the point that, in varying degrees, all of the 77 cities in the County contract for at least one or more County services. Thirty of the 32 never cities incorporated since 1954 contract with the County for the major portion of their municipal services.

In contrast to the extensive use of contract service from the County, few cities - either in Los Angeles County or anywhere else in the State - have contracted for a municipal service from another city. While most cities have established joint powers agreements to provide for cooperative use of specialized equipment, facilities and staff services, there are few instances of a city obtaining a full municipal service, such as fire protection, from another city on a formal contract basis. In Orange County the City of Yorba Linda obtains all of its police services from the City of Brea by contract. To our knowledge this is one of the few instances in this area of such an inter-city contract. Yet, it would appear that some cities, particularly smaller cities, could achieve cost and service benefits by contracting their fire protection from a larger neighboring city rather than provide this service themselves.

Cost and Service Benefits

Similar to inter-city consolidation, such a contract would enable two cities in effect to combine their resources to provide a single fire service to

both cities. Furthermore, this concept need not be limited to two cities; a system of contract service suited to a particular area could be established among a group of cities, one city agreeing to provide the service and the others agreeing to contract for it.

We have seen from the examples of consolidation in Orange and Contra Costa Counties that significant cost and service benefits can be achieved by merging small departments into a larger, consolidated operation. There appears to be no reason why the contract method cannot be used to produce similar benefits.

The contract approach moreover has the advantage of simplicity in that it avoids a number of the problems which confront cities when they attempt to establish an inter-city consolidated department. Under a contract system there is little danger that the insurance grade of either the city providing the service or the cities receiving it would be affected, except perhaps for the better, since the merging of resources should improve the overall level of protection. There would be no problems caused by differences in fire department operating methods, nor those caused by differences in salary levels, fringe benefits, and retirement plans. Finally, there would be no problems involving the allocation of costs and the appropriate credit to be given each city for the use of its facilities and equipment in the joint operation.

Problems of Contract Service

There could perhaps be some problems over determination of an appropriate contract price and over the disposition of the facilities and equipment from the discontinued departments. There could also be problems over the assignment and placement of employees. Since consolidation, as we have seen, usually results in a reduction in total manpower, the department providing the

service probably would not require all personnel who had previously worked in the discontinued departments. Some plan) therefore, would have to be worked out to handle these excess employees) perhaps carrying them in the remaining fire department until their positions could be phased out or transferring them to vacant positions in other departments whenever this is possible.

These problems) however, clearly are not major ones and can certainly be resolved. If, then, the contract method avoids some of the complexities of inter-city consolidation and at the same time appears to offer similar cost and service advantages, why has it received so little attention and consideration as an alternative to a single-city department?

Undoubtedly the answer to this question lies in the concern which city officials have over maintaining local autonomy. There is a real fear among these officials that if they delegate the responsibility for fire protection to another agency, they will lose control over both the cost and level of the fire services furnished to their cities. There is also a natural "pride of ownership" among city officials, some of whom would probably resent employees of another city working within their boundaries. This feeling strongly motivates them to maintain their own fire department and to resist vigorously any attempt to take this responsibility away from them. Hence any proposal that implies that a sister city is better equipped to furnish fire services to their area is likely to be received with something less than enthusiasm.

Conclusion

Nevertheless, increasing financial pressures in the future are bound to break down to some degree this resistance. It should be noted also that cities which contract a service from another city can exert considerable influence on the quality and level of service provided to them. As customers in an

arrangement which is also of benefit to the servicing city, they should be in a position to maintain a mutually agreeable contract. We believe, therefore, that for any city interested in reducing the cost and improving the level of its fire protection, the possibility of contracting this service from an adjacent city is another alternative which should be seriously investigated.

XIV. CONTRACT SERVICE FROM A PRIVATE FIRM

Private companies have been furnishing a wide variety of contract services to municipalities for many years. Cities have found it both an economical and highly satisfactory device for such services as street sweeping, tree trimming, election services, public works engineering and construction, and animal control, to name a few.

Private Contract Service in Arizona

On the other hand, although not unusual in some parts of Europe, we are aware of only one instance in this country of a private company providing fire protection services on a contract basis to an incorporated city. This is in Arizona where the Rural/Metropolitan Fire Protection Company, a corporation operating as a State chartered public utility, provides fire protection to the City of Scottsdale and a number of incorporated and unincorporated communities in rural and suburban Arizona. This firm, co-only referred to as Rural/Metro, has been in business for 22 years. It employs over 200 full-time and part-time employees and now operates 50 pieces of equipment from some 19 facilities in an area of 2,700 square miles with a population of 250,000. In 1971 the value of its fire service contracts was about $2,000,000.

Because the use of a private firm to provide public fire protection service to an incorporated city is uncommon in the United States, Rural/Metro has been the subject of substantial interest among city officials and fire protection administrators throughout the country. To determine what relevance, if any, this private fire service concept might have for Los Angeles area communities, this committee arranged for a survey team to visit the Rural Metropolitan Fire Protection Company headquarters in Scottsdale and review its fire service

operations. The survey team consisted of Raymond Brunstrom, Battalion Chief in the Research and Planning Division of the Los Angeles County Fire Department, and William Larrabee, a systems analyst from the Los Angeles Technical Services Corporation. In the interest of time, the survey team confined its investigation of Rural/Metro to the incorporated City of Scottsdale which is more typical of any application that might take place within Los Angeles County.

The following discussion reflects the findings of the survey team derived from their observations of the physical facilities of that city's fire department and from interviews with Dale Carter, City Manager of Scottsdale, and Louis Witzeman, President of Rural/Metro and the duly appointed Fire Chief of the city.

The City of Scottsdale

Scottsdale is a suburban residential and resort community adjacent to Phoenix and Tempe, Arizona. In the 20 years since incorporation its population has grown from 2,500 to a current level of about 75,000. It covers an area of 70 square miles, 30 of which are undeveloped and sparsely populated. The city has an assessed valuation of $103,143,000 based upon a theoretical l8%. ratio of assessed value to market value for residential property, 25% for commercial, and 40%. for industrial. The buildings in Scottsdale are mostly new and include single family residential, multiple occupancy, commercial, and a few industrial structures. There are only three buildings of over three stories, and a recent ordinance prohibits construction of buildings higher than seven stories.

Rural/Metro Operations

Under the private contract system, fire protection in Scottsdale is really a combination of public and private protection. The city owns nearly all of the facilities and equipment. It also furnishes cross-trained city

employees who supplement the department's full-time engine company firemen. Rural/Metro provide. a core of full-time administrative, maintenance, and fire protection personnel and equipment.

The cross-trained city employees are called "wranglers" and are paid a monthly retainer fee as well as a flat hourly rate for time spent on fire emergencies and weekly practice drills. The wranglers are regular employees of the city's Public Works and Parks departments. Cross-training of police personnel has been avoided on the theory that integration of emergency services can create manpower problems on a major incident when policemen are needed for crowd control and traffic regulation, or other more critical law enforcement problems.

Rural/Metro operates out of four locations in the City of Scottsdale. The centrally located headquarters station is manned by seven firemen on 24-hour shifts and two firemen on 8-hour shifts from 3 to 11 p.m. (hours of greatest fire incidence). There are also three supervisors on the day shift, at least one of which responds to all structural fires. There is a dispatcher on duty at all times. During the daytime hours a fireman handles dispatching duties. He is replaced by one of the supervisors if all personnel in the station respond to an emergency.

The second station within the city proper carries en around-the-clock strength of three men. Manning is a mix of 24-hour shift firemen, mechanic/ firemen working the regular day shift, and personnel to cover the night shift on week days. The third station is located north of the city at the Scottsdale airport and is manned by one fireman on a 24-hour shift who is assisted by volunteers when an incident occurs.

The fourth engine company location is in the city's public works maintenance yard in the southern end of the city. This company is manned by a crew of public works employees cross-trained as firemen under the supervision of a

driver-officer. A group of about 20 of these cross-trained employees rotate as duty crews of four or five. If needed, crew members are dispatched directly to an incident by means of a belt-attached radio pager carried by all wranglers. The driver-officer responds to the emergency with the fire apparatus.

In its fire suppression operations Rural/Metro uses 4 inch hose and a small attack truck (300 gallon tank) which is company designed. This truck is disptached with the regular pumper company. The use of this dual response using personnel normally assigned to one unit is the result of an analysis conducted over a period of months of the number of fires which could have been handled by the small attack truck. The attack truck, because of its size and maneuverability* responds faster than the large pumper engine. Rural/Metro found that over 90% of the incidents occurring over a 12-month period could have been handled by the attack truck alone.

Another interesting procedure used at Rural/Metro is storage of pre-fire plan drawings of buildings on microfilm. This system allows the dispatcher to relay vital information concerning a building to any suppression forces operating at an emergency.

Fire Protection Costs

A significant feature of private contract fire protection in Scottsdale is its low cost. Chief Witzeman estimates the 1971-72 expenditures by the city for fire protection at $330,000 including depreciation of assets. Of this, $210,000 was for the service agreement with Rural/Metro, $61,008 was for salaries of cross-trained employees paid directly by the city, and the balance of $58,992 was for maintenance and operation of facilities and equipment. The cost per $100 of assessed valuation for this period was 32 cents while the per capita cost was $4.40.

In comparison, two neighboring cities, Tempe and Mesa, with similar development, insurance grades, population and fire 1058 records have per capita costs of $10.36 and $14.70 respectively. In Los Angeles County, the average cost per $100 of assessed valuation for ten cities of comparable size was 85 cents for the same period. The average per capita cost was $22.16. For comparative costs of cities in Los Angeles County, see Exhibit 6.

Since we did not review the operations of the Tempe and Mesa fire departments, we cannot comment on the differences in their per capita costs with that of Scottsdale. On the other hand, the favorable coat differential between Rural/Metro and fire departments in Los Angeles County can apparently be attributed in part to a number of differences in local conditions and in part to Rural/Metro's operating policies.

First, the complexity of fire protection problms in Scottsdale is moderate. As we have noted, it is a commercial and residential city with limited industrial areas. Most of its structures are new and only three are over three stories high. Consequently, it does not require an extensive allocation of manpower and equipment to maintain an adequate level of fire protection.

Second, the insurance grade for the department is Class 6. The classification for the city varies from Class 6 to Class 9, principally because of variations in the water supply. (The city is currently in the process of being regarded.) As we showed in Chapter VII in our analysis of fire department costs, there is a strong relationship between fire department expenditures and the insurance grade of the department. Higher expenditures relate to lower grades, and lower expenditures to higher grades. The Scottsdale department's relatively high grade, therefore, could mean that the city has been willing to accept a higher insurance grade in order to achieve the benefit of lower fire department expenditures.

Third, the company operates in an extremely favorable economic climate with regard to personnel costs. The full-time firemen work an 84-hour week at a pay scale of $700 per month. In contrast, the standard work week in most departments in Los Angeles County is 56 hours, and the pay scale ranges between $900 to $1100 per month. Since personnel costs amount to approximately 90% of a fire department's total costs, this<factor becomes extremely significant in explaining the favorable cost differential which Scottsdale enjoys.

Fourth, the use of cross-trained city employees further reduces personnel costs. Chief Witzeman estimates it would cost Scottsdale about $150,000 annually to provide full-time manning to equal the strength and value of the cross-trained employees.

Fifth, the department has adopted a number of unconventional operating practices primarily directed toward reducing costs. According to Chief Witzeman, station construction and heavy apparatus acquisition costs are held to a minimum through the use of station personnel during slack periods. Two stations have been built without interior walls. Moveable partitions were then constructed and installed by station personnel. Witzeman also states that Rural/Metro achieves savings of up to 407. in the acquisition of fire trucks by acting as prime contractor for the city and sub-contracting for the fabrication of component parts to be later assembled by on-duty firemen.

One pumper, for instance, was assembled by Rural/Metro firemen using some standard components along with a company designed tank and compartment modules which permit a wide versatility of use. This truck has a tailboard pumping unit which can be left at one location to be operated independently, while the truck with its own built-in pumping unit can be used elsewhere on the same fire or at another incident. Chief Witzeman says that this unit was built

for under $25,000, less than half what it would have cost if it had been acquired through a normal bid system using regular equipment suppliers.

Sixth, the cost of the company's service to Scottsdale is further reduced by sharing administrative overhead with other communities served by Rural/Metro.

Finally) Rural/Metro as a private firm must make a profit in order to stay in business. It is reasonable to conclude that this fact has had significant influence in generating a cost-conscious operation on the part of the company's management and its employees. Moreover, although Rural/Metro at this time has no competition in the private sector, it is always faced with the possibility that the City of Scottsdale can establish its own department if it becomes dissatisfied with Rural/Metro service. Since the city already owns nearly all of the facilities and equipment and furnishes the cross-trained employees, this action would not be particularly difficult to undertake.

Statements of City Officials and Residents

Our limited investigation of Scottsdale's fire service does not qualify us to judge the overall effectiveness of this system. However, there appears little doubt that city officials and residents of Scottsdale believe Rural/Metro is providing the city with an acceptable level of service at an attractive cost.

Dale Carter, City Manager of Scottsdale, states that city officials are very satisfied with their fire service. The action of the city council in encouraging and supporting the innovative programs of the company, he says, bears out this statement and reflects an excellent contractor/client relationship.

An informal inquiry by William Torrence, a member of the Economy and Efficiency Committee, while on a recent business trip to Scottsdale elicited only comments of praise from business and professional associates of that city.

The consensus of the responses to his question of the quality of the city's fire service can be summed up in the answer given by Mr. James A. Normand, Executive Vice President of M. M. Sundt Construction Company, one of the larger general contractors in Arizona. "The Scottsdale Fire Department is run as a successful business," Normand said. "I believe that more agencies could benefit from this type of operation."

The Feasibility of Private Contract Service in Los Angeles Count

The critical question, however, for the purpose of our report is not whether such a system is operating successfully in Arizona but whether it could operate successfully in the Los Angeles area. Obviously this is not an easy question to answer. Because a system is operating successfully in one region, does not guarantee that it will operate successfully in another area, where both political tradition and the economic environment may be substantially different. Thus any city in Los Angeles County which may be interested in considering this alternative should carefully examine these differences.

It may well be, for example, that the public agency concept of fire protection is so traditional in the Los Angeles area that any attempt to adopt a private contract approach would create such a furor that it would not be worth the effort. There are also major differences between Arizona and California in the power and influence of labor unions. The unions in California are unquestionably more powerful, more aggressive, and operate from a stronger legal base than their counterparts in Arizona. Arizona, for example, has a right-to-work law which prohibits union membership as a requirement for employment. California does not. In contrast to Los Angeles County, public employee unions in Arizona are small and poorly organized. There is no public union at all operating in the City of Scottsdale.

Any city in Los Angeles County considering adoption of the private firm concept can expect intense opposition and hostility, not only from the public fire fighters unions, but from all public employee unions. Thus serious employee morale problems could be created in other departments of the city. These employee problems could be further aggravated by problems over the assignment and placement of the employees surplussed by the discontinuance of the city department. While some of these employees could be placed in the private firm and some in other city departments, almost certainly others would have to be laid off. In addition, any mutual aid agreements which the city might have with neighboring cities operating public departments could be threatened with cancellation or severe limitations.

It is also certain that a private firm in Los Angeles County would inevitably be forced by union pressure and organizational activity to adopt the standard work hours and pay scales generally in force in other fire departments in the area. It may be noted in this context that employees of a private firm in California have the legal right to strike; public employees do not. Thus one of the most significant cost advantages operating in favor of Rural/Metro in comparison to departments in Los Angeles County would be significantly reduced, if not eliminated.

Moreover, the adoption of a private contractor system by one or a few cities in Los Angeles County would not solve the serious problems created by the present small unit, multi-jurisdictional system now in operation. Rather, it could well add yet another complicating factor - that of mixing public and private agencies with divergent philosophies and operating practices. A fairly extensive adoption by a number of cities would be required before a private contracting system could be expected to produce much effect on these problems.

Finally, it is important to note that while the expectation of profit in a private system provides a continuing incentive to reduce costs, the profit item itself is a cost to the agency served. In comparison, there is nothing to prevent a municipal department under a strong and effective city management from achieving similar economies without incurring this additional cost.

From this point of view perhaps the greatest value a private system would have, if one were established in this area, is the competition that it would generate between the two types of systems.

While fire protection has traditionally operated as a public agency service in this country, there are other areas of public service which long have had a tradition of private versus public competition. For over a century private and public utility companies have competed with each other, and during this time a continuing debate has been conducted over which provides the more efficient and economical service. Most citizens today would probably agree that efficient and well-managed companies operate in both the private and public sectors.

Similarly, in the educational field we have had competition since colonial times between public and private schools at all levels. Few citizens, we are sure, would argue that this competition has not been healthy for both Systems.

Conclusion

The private firm concept may not be practical in this area because of the employee and union problems it may cause a city and because of the serious strain it may place on a city's relationship with neighboring jurisdictions. Perhaps in outlying areas where new cities may be established, the concept would have the best chance of success.

Nevertheless, in spite of the serious problems that might accompany efforts in this area to adopt it, we believe that any city which is finding its revenues increasingly strained by the rising cost of services should give this concept serious study. Moreover, if a number of neighboring cities were to undertake a joint study to determine the feasibility of using the concept as a group, the practicality and effectiveness of private service might be considerably increased. At any rate, we do not believe that the concept should be arbitrarily dismissed because it has never been tried before in this region.

XV. REGIONAL FIRE PROTECTION DISTRICT WITH VOLUNTARY MEMBERSHIP BY JURISDICTION - WHAT CITY OFFICIALS SAY

The seventh alternative to the independent city system of fire protection is a regional fire protection district with voluntary membership by Jurisdiction. This alternative is of course currently provided by the Los Angeles County Consolidated Fire Protection District. The question is, can cities which now operate their own departments realize cost and service advantages by joining the district?

To help us analyze and answer this question our staff conducted personal interviews with 48 city officials in 35 district and independent cities (See Appendix C for a list of these officials.) We present their views in detail in this chapter with limited editorial comment on our part. The committee's own comments and conclusions are presented in the following chapter.

District Cities

Until 1954 the fire district system furnished protection only to unincorporated areas in the County. In that year Lakewood incorporated and chose to remain a part of the Consolidated Fire Protection District. Since that time 31 other cities have incorporated. Among these, 29 elected to remain in the district system. Two cities - Downey and Santa Fe Springs - elected to establish their own departments.

Only in recent years have cities which incorporated prior to 1954 shown an interest in using district services. In 1967 Glendora annexed to the Consolidated District, followed by Signal Hill in 1968, Maywood in 1970, Huntington Park in January, 1971, and most recently Bell in October, 1971. (For further details on district development, current operation, and procedures for annexation, see Appendices D and E.)

Since the officials in these five cities have had the experience both of operating their own fire department and receiving district service, we were particularly interested in hearing what they had to say about the two types of service. What were the circumstances which led to their decision to join the district? How do they view that decision today? How do they compare the two types of service? The answers to these and other questions are presented below, beginning with Huntington Park, the largest of the five cities.

Huntington Park

According to City Administrator Harold Campbell, the Huntington Park Fire Department, prior to annexation, maintained three fire stations housing four engine companies, one truck company, one rescue unit, and a fire prevention bureau. The department had a total complement of 51 employees consisting of a fire chief, three battalion chiefs, a captain and an engineer assigned to fire prevention activities, and 45 shift personnel assigned to 24-hour fire suppression and rescue duty. The department maintained the following apparatus and automotive equipment:

4 pumpers, 1000 GPM (gallons per minute) to 1500 GPM
2 aerial ladder trucks, 35 and 75 foot ladder lengths
1 rescue ambulance, 1 station wagon, 1 pickup truck, 4 sedans.

Upon annexation, titles to stations No. 1 and No. 2 were transferred to the district on the condition that title would revert to the city whenever the district ceases to use these facilities to provide fire protection and related services to the city. Station No. 3, located in the eastern section of the city, was not transferred to the district and remained the property of the city. It was not required by the district because of the close proximity of an existing district station in the City of Maywood whose effective response area had previously overlapped the now surplus Huntington Park facility. This fire

station is presently being renovated for use as a community theater workshop by a group of Huntington Park residents under a cooperative arrangement with the city's Parks and Recreation department.

District battalion headquarters *as transferred from nearby district station No. 9 in the adjoining unincorporated area to the former Huntington Park headquarters station No. 1 because of its larger size and strategic location. An engine company, a truck company) and two fire prevention inspectors are assigned to this facility. One of these inspectors is a former Huntington Park battalion chief. An engine company and a rescue unit are assigned to the second station.

Of the thirteen vehicles owned by the city fire department, three pumpers and the two aerial trucks were transferred to the district. The eight surplus vehicles were retained for disposition by the city. Of these) the station wagon was transferred to the city police department for use as the field sergeant's patrol unit. The remaining pumper) the rescue-ambulance, one sedan, and an inter-station communications unit were sold to the City of Santa Fe Springs for $9,200. The remaining three sedans and the pickup truck were sold at a public auction for slightly more than their retail blue book value.

The 51 employees of the city fire department, Campbell reported, were transferred to the Consolidated District with salary increases varying from $4 to $64 per month, the average increase being $42. However, realignment of the fire defenses by the district, taking into consideration the availability of existing manpower and equipment from nearby facilities, significantly reduced the number of personnel and apparatus required to provide an adequate level of protection to the City of Huntington Park. Station personnel was reduced from 45 to 36 positions. The fire chief's position was, of course, no longer required. The incumbent was transferred to a vacant district battalion chief position with

a nominal increase in salary. The three city battalion chiefs were transferred to the district as captains, one level below their former city rank. The administrative and supervisory duties of the former fire chief and the three battalion chiefs were assumed by district chief officers already in charge of the area adjoining the city.

While there are still two fire prevention positions assigned to the former city headquarters station, the area covered by these positions has been expanded to include the unincorporated communities of Willowbrook, Florence-Graham, and Walnut Park, in addition to the City of Huntington Park. This more effective use of inspection personnel, Campbell said, is possible without detrimental effect upon the quality of fire prevention activity because the bulk of the inspection of commercial and light industrial establishments is now handled by station personnel in accordance with standard district practice.

The restructuring of fire protection in the City of Huntington Park made possible a net reduction of 15 positions. The personnel not required in that city were used to fill engine company vacancies then existing in the district organization. These vacancies would normally have required the recruitment and training of new firemen.

Campbell reported that although one station was closed, 15 positions were eliminated, and the amount of equipment located within the city was significantly reduced, an optimum level of fire protection was maintained in Huntington Park by the district following annexation. In district operations a valuable support factor is built into fixed, preplanned response patterns in which men and equipment are programmed for sequential response within a given geographical area. Second and third alarms are called at the first indication that additional help is required to control an emergency. An automatic move-up of engine companies from nearby district stations protects the response areas of companies dispatched to an emergency.

Campbell emphasized, however, that before annexation to the district Huntington Park belonged to the Southeast Cities Mutual Aid Pact, one of two major mutual aid pacts in the County which provide for preplanned response patterns. Thus, the city enjoyed a similar kind of back-up support when it operated its own department. (A description of the organization and operation of these two formal mutual aid pacts is contained in Appendix A.)

A concrete illustration of the effectiveness of district fire fighting forces occurred in August, 1971, when a large fire broke out in a two story commercial building at the intersection of Pacific Boulevard and Slauson Avenue. This was the first major fire, Campbell said, to occur in the city after annexation to the district. Within three minutes of the first alarm seven units with 18 men had arrived at the fire - four engine companies, one truck company, and two rescue units. Two more engine companies arrived within five minutes and a second truck company within six minutes. Two other units, called in as backup, arrived later, making a total response of twelve units and 35 men. Two division chiefs and two battalion chiefs directed the operations at the scene.

Although Huntington Park is pleased with the level of service it is receiving, the principal reason the city joined the district, Campbell emphasized, was not to improve service but "for the financial savings due to the district's method of levying costs to contract cities." How well then has this objective been met?

Campbell reported that the city joined the district in January, 1971, in the middle of the 1970-71 fiscal year. The cost of operating the city department for the first six months of the fiscal year was $424,697. The cost of the district service for the last six months was $271,904. The difference of

$152,793, Campbell said, constitutes a direct savings to the city. If the district had performed the service for the full year, the savings would have amounted to $305,586.

Campbell, however, also pointed out that the district tax levy for the fiscal year 1971-72 rose from 65.0 cents to 74.99 cents per $100 of assessed valuation, the largest single increase in the history of the district. Campbell believes this increase was due principally to what he considers to be excessive salary increases which were given to County firemen, an 11% increase in April, 1970, and another 11% increase in July, 1971. "If these costs continue to spiral upward," he said, "then our savings will be reduced to nothing in five to seven years."

Mayor James Roberts of Huntington Park, with whom we also talked, stated) "While the city is receiving the service it wants and the district response to the city's requirements has been excellent, we have no control over an increase in the cost of those services. If the district service is to remain attractive in the future, then the district must maintain effective control over district costs."

This is a theme which was repeatedly brought up in our interviews with city officials both in district and independent cities. We shall have more to say about it in the next chapter of this report.

Glendora, Maywood, Signal Hill and Bell

City officials in Glendora, Maywood and Signal Hill also reported a significant reduction in fire service costs and expressed a high satisfaction with the level and responsiveness of district service. Since Bell only recently has joined the district no actual operating figures were yet available on its experience.

Grant Brimhall, City Manager of Glendora, stated that if Glendora were still operating its own department, it could not possibly match the resources in manpower and equipment available to the city from the district. Even to attempt something similar would require a department of at least 100 men. With district service, on any brush fire 72 men respond on the first alarm alone.

Since 1967, when Glendora entered the district, the savings, according to Brimhall, have amounted to an average of $120,000 annually. In the past three years, the city has transferred a total of $360,000 to a capital improvement fund which had not existed before annexation. With this money the city has bought park land, developed a new park, improved existing parks, and purchased additional land adjacent to land already owned by the city for a new library. The library is now under construction.

Brimhall, however, also expressed serious concern over the 10 cent increase in 1971 in the district tax rate. "If this trend continues," he said, we are in trouble." However, he added that in the nine previous years the district tax levy has increased by a total of only 6.5 cents, He expects this pattern to be re-established, and if this is the case, Glendora will continue to realize savings of $100,000 to $120,000 annually.

In Maywood, which joined the district in July, 1970, Councilman Leonerd Locher expressed complete satisfaction with his city's first year of operation in the district system. "We have had no problems about local control," he said. "The district personnel have been prompt and responsive in answering every request. We now have two and three times our previous fire protection capability. We also have achieved significant savings in cost of service and this has been a major factor in solving our financial problems." Locher reported that district service saved Maywood approximately $40,000 in the first year of

operation. The one councilman, he said, who opposed the annexation in 1969 is now completely in support.

In Signal Hill, City Administrative Officer Ronald Prince reported that Signal Hill is satisfied with the service provided. There is no question, he said, that in case of any major fire the district will provide almost unlimited services. Nadine McCartney, Finance Director, said that the city reduced its fire service costs by approximately $32,500 annually when it joined the district in February, 1968. Those savings were achieved even though Signal Hill paid a special fee to the district for an additional position over and above the engine company staffing proposed by the district. The annual cost of this position at the time of the annexation was $37,828. This year Signal Hill did not renew the supplemental contract for the extra position. Mrs. McCartney, therefore, estimates that the city will continue to realize substantial savings despite the district tax levy increase.

In October of last year the City of Bell became the fifth city to discontinue its own fire department and join the district. In its report to the Bell City Council on district services the district estimated that Bell will reduce its fire service costs by $90,000 annually. John Pitts, City Manager of Bell, reported that he believes the estimate is conservative. Bell joined the district, he said, for two reasons: to reduce costs and to provide a service which can better meet serious emergencies. When Huntington Park and Maywood joined the district Bell was completely surrounded by the district. By joining the district Bell will continue to be serviced by one station within its boundaries. In addition it will have the backup services of ten other district stations operating in close proximity in the district area surrounding Bell.

As in the case of Huntington Park, the substantial expansion of fire protection resources provided to these cities through annexation to the district

was also accompanied by an overall reduction in facilities, equipment and personnel assigned to the same areas. The following table summarizes the results as reported to us by the concerned city officials.

GLENDORA

	Prior City and *District Operation	Current District Operation	Reduction
Positions			
Fire Chief	1	0	1
Assistant Fire Chief	1	0	1
Fire Prevention Inspector	1	0	1
Dispatcher	1	0	1
Personnel - 3 City Stations	30	30	0
Personnel- 1 District Station	9	0 (Station	9
	43	30 Closed)	13
Equipment			
Pumpers	5	3	2
Brush Truck	1	1	0
Rescue Truck	1	1	0
Sedans	2	0	2
	9	5	4

* Unlike that of the other cities the annexation of Glendora made possible the closing of a district station which had been required for the protection of unincorporated areas and islands in and around that city.

MAYWOOD

	Prior City Operation	Current District Operation	Reduction
Positions			
Fire Chief	1	0	1
Station Personnel	13	9	4
	14	9	5
Equipment			
Pumper	3	2	1
Rescue Truck	1	0	1
Pickup Truck	1	0	1
Sedans	2	0	2
7 2 5			

SIGNAL HILL

	Prior City Operation	Current District Operation	Reduction
Positions			
Fire Chief	1	0	1
Fire Prevention Inspector	1	0	1
Station Personnel	18	12	6
	20	12	8
Equipment			
Pumpers	3	1	2
Hose Wagon	1	1	0
Rescue Salvage Truck	1	0	1
Rescue Truck	1	0	1
Pickup Truck	1	0	1
Sedan	1	0	1
	8	2	6

BELL

	Prior City Operation	Current District Operation	Reduction
Positions			
Fire Chief	1	0	1
Assistant Fire Chief	1	0	1
Station Personnel	18	12	6
	20	12	8
E*ipment			
Pumpers	3	3	0
Pickup Truck	1	0	1
Panel Truck	1	0	1
Sedans	2	0	2
	7	3	4

To suninarize, annexation to the district by five cities which formerly operated their own fire departments has resulted in the closing of two fire stations. (See Exhibit 8.) It has reduced personnel by 49 positions, including 5 fire chiefs, 2 assistant chiefs, 3 battalion chiefs, and 8 other administrative and supervisory positions. In addition, 27 pieces of apparatus and

automotive equipment have been eliminated) including 6 pumpers. Total annual reduction in cost of fire services to these cities is estimated at $588,086.

As a result of the annexation the insurance protection class of Glendora was reduced from Class 5 to Class 4, and similar reductions are expected in Maywood, which now is Class 5, and Signal Hill, which now is Class 7. This improvement, according to the concerned city officials, can be attributed to the substantially greater level of fire protection provided for these cities by the Consolidated District. Huntington Park and Bell previously were graded as Class 3 and 4 respectively, and these gradings are not expected to change.

In Chapter III we discussed the relationship of a community's insurance class to the total cost of fire protection. We pointed out that improvement of a community's insurance class and the accompanying reduction in premium costs is usually achieved by the expenditure of tax funds to upgrade the level of a community's fire defenses. We further substantiated this point in our statistical analysis of department expenditures in Chapter VII. Regression and correlation analysis reveals a strong relationship between expenditures and insurance grade; the higher the expenditures the lower or better the grade. Under these circumstances the savings in insurance premiums is often partially, if not wholly, nullified by the expense of upgrading the fire defenses and the continuing additional cost of maintaining them. Grant Brimhall, City Manager of Glendora, pointed out that this was not the case in Clendora. The residents of Glendora, he says, are now receiving the benefits of an improved insurance grading, but contrary to the usual pattern, they are paying less rather than more for the additional fire protection which brought about the change in grading.

Other District Cities

In addition to city officials in the five cities which have recently joined the district, we also interviewed officials in cities which have been in the district since their incorporation. While a number of these officials expressed concern over the increase in the district tax levy, all officials reported general satisfaction with the quality and level of the district service and the responsiveness of the district to local needs.

Howard Schroyer, City Manager of Pico Rivera and himself a former fire chief in the cities of Chino and La Habra, said he considers the fire department as his own. "We have no problems on response to any fire," he said. "There are four engine companies in the city and if more equipment is needed, it is always available." C. Leland Gunn, City Manager of Rosemead, reported that the district gives him excellent service and is very responsive to local needs. "I call Chief Russell, the Division Chief responsible for our area," he said, "and receive a response just as if he were the fire chief of our own city fire department."

Lawrence W. O'Rourke, City Administrator of Commerce, a heavily industrialized area, said, "The district service is excellent. The battalion chief in charge is in effect the local fire chief. The personnel are excellent, and the department operates at a very high standard. The city could not meet these standards with a local department."

In no case did we find anywhere any thought or consideration being given to withdrawal from the district. One city manager told us that he would like to see more effort put into fire prevention work; another reported that there were occasional annoyances over district service. This was the extent of the criticism we heard. The consensus of these officials is that the district is responsive to their local needs and that if they operated their own

departments, they could not match the cost or level of service provided by the district.

Similar findings were reported in 1969 by a citizen5 committee in Maywood which conducted a survey of district cities using a written questionnaire. This committee, consisting of six Mayvood residents, was appointed by Leonard Locher, then serving as Mayor, to study the city's financial problems. The committee was asked to make recommendations leading either to increasing revenues or reducing costs. In June, 1969, the committee submitted a report which expressed strong opposition to increasing revenues by additional taxes and recommended instead annexation to the Consolidated Fire District as a principal means of reducing costs. (Ways and Means Committee of the City of Maywood, Joseph F. Mora, Chairman, Report to Maywood City Council, June 10, 1969.)

Included in the report were the replies the committee had received to their questionnaire from the district cities. All cities answered that they were satisfied with district service and could not afford to support a comparable service. We quote from some of these replies:

> Clifford A. Nordby, City Manager of Baldwin Park - "No city in the County can operate independently as efficiently as the County department. The savings in insurance premiums alone makes County protection worthwhile."
>
> Peter B. Feenstra, City Administrator of Bellflower - "Taking all aspects of fire protection and prevention into consideration, I feel our agreement with the County is by far the best, both financially and in protection."
>
> M. D. McKeown, City Administrator of Norwalk - "I feel that the comparative low cost to the city is a direct result of the District's ability to eliminate duplicat*on, unnecessary expenditures and the like created by overlapping boundaries."
>
> Jack A. Simpson, City Administrator of Hawaiian Gardens - "There is no way we could compete independently for qualified personnel."

William J. Stark, City Manager of Cerritos - "Local control - this concept is often used as a sham behind which we can hide an inadequate service. Good fire prevention programs and control of conflagrations have nothing whatsoever to do with municipal boundaries. The important thing is having the right man, the right equipment and sufficient numbers of both at the right place, at the right time . . . Too often I have seen the local small town fire chief hesitate to call on adjoining communities until the situation is completely beyond his control."

E. Frederick Bien, City Administrator of Carson - "Six weeks ago we had the Fletcher Oil Refinery fire. We had over 16 units at the fire and over 85 men plus emergency communication equipment. We have one station within the city."

The committee report concludes: "After reading all the information on the subject, it seems illogical that Maywood should still try to maintain its own fire department when its neighbors are getting more and better services at less cost."

It was on the strength of this report that the Maywood City Council voted to annex to the district.

Independent Cities

In 1954 Lakewood incorporated and became the first city to join the district system. Since that time 31 other cities have incorporated. Among these, two cities - Downey and Santa Fe Springs - chose to establish their own fire departments rather than continue the district service which had provided fire protection to their areas before incorporation. Among the independent cities, therefore, we were especially interested in interviewing officials in these two cities to determine why they had decided to discontinue the district service.

Downey and Santa Fe Springs

In Downey we talked to City Manager Charles W. Thompson and Fire Chief Robert W. Cain. Chief Gain was appointed as Downey's first fire chief several

months after incorporation in December, 1956. Mr. Thompson was appointed to his position in April) 1970. Chief Gain reported that Downey withdrew from the Consolidated Fire District when the city incorporated for three basic reasons. 1) Downey officials believed that the district was more oriented toward rural fire protection and could not furnish as high a level of service as the city required. 2) They believed the city could achieve a higher fire insurance grade with its own department. At that time the district department was graded Class 4 and the city was graded Classes 4, 5, 6, and 7. The Downey department is now Class 2, and the city is Class 3, indicating that Downey has substantially improved its fire defenses. 3) The County Fire Fighters Union, Local 1014, worked actively to oppose the incorporation and after incorporation also conducted a campaign against withdrawal from the district and the formation of a city fire department. This activity created some resentment among some city officials and many citizens against the Consolidated District.

Both officials expressed complete satisfaction with the operation of their own department. They see no cost or service advantage to Downey in joining the district. Rather they feel Downey would lose control over both level of service and the cost of service and could well risk the loss of its favorable insurance grading by joining the district.

Robert L. Williams, City Manager of Santa Fe Springs, reported that union activity had also created antagonism toward the district when Santa Fe springs incorporated in 1957. The union had conducted a campaign opposing creation of the city department and withdrawal from the district. It had also supported a recall movement on this issue against two city council members. More important, perhaps, the newly elected city council was motivated by a strong sense of civic pride and was anxious to adopt an independent course.

It is not likely, Williams believes, that Santa Fe Springs could improve its insurance protection class in industrial areas by joining the district. The city could perhaps reduce fire protection costs, but only by a small amount.

According to Williams, the city is now enjoying a high rate of industrial growth and expects this growth to continue. If Santa Fe Springs joined the district, the increase in assessed valuation resulting from the industrial growth would cause a corresponding increase in the cost of district service, since the district tax is levied at a uniform rate against assessed valuation. Hence, with the constant increase in assessed valuation, the cost of the district service could become excessive.

It is true, Williams said, that cities with higher assessed valuations probably should pay relatively more for the service, since they have more to protect and therefore require a higher level of service. Yet, it is very likely that as assessed valuation increases the increase in the cost of the service at some point begins to exceed the value of the additional service received. Thus cities with higher assessed valuations in the district system tend to subsidize the cost of fire service for other cities in the system with lower assessed valuations. Because of its heavy industrial growth this is the position Santa Fe Springs could find itself in if it joined the district.

Finally, Williams pointed out that the Fire Chiefs of Santa Fe Springs and Whittier have developed a plan for an inter-city consolidated department which shows promise of substantially improving service and reducing fire department costs for both cities. (This plan was described in detail in Chapter XII.) Under this plan, Williams said, Santa Fe Springs and Whittier would retain direct control over the level and cost of the fire service. As we have noted,

this feature of inter-city consolidation is emphasized as one of the principal advantages this alternative has over the district system.

Other Independent Cities

City officials in other independent cities, cities which have long had their own departments and have never received district service, expressed similar as well as additional views on the independent versus district system.

Keith Mulrooney, City Manager of Clarement, said that the district has well qualified personnel and does a good job but there are some offsetting factors as well. He feels that the greatest danger in expansion of the district system into a single regional fire department is its vulnerability to union pressure and the threat of a strike. Enlarging the district would enlarge and strengthen the County Fire Fighters Union, and the Board of Supervisors, he said, has shown no ability to control the demands of the union. This is indicated by the pay raises the Board has given to firemen. From June, 1967 to July 1, 1971, County fire and Sheriff salaries were raised approximately 557.; at the same time, the cost of living for the Los Angeles metropolitan area increased less than 20%..

As evidence of the better control at the local level that the cities have in contrast to the County, Mulrooney said that Claremont hasn't expanded its authorized fire personnel since 1966.

At Claremont S request, Mulrooney reported, the County conducted two studies on the cost of district services to the city. One study showed a slight annual saving to the city of less than $1,500; the other showed a slight additional cost to the city. It therefore seemed unlikely that Claremont could save any money by joining the district at the time the studies were conducted.

In 1967, Claremont initiated a program in which police officers are trained to perform extra-duty fire services. Officers who volunteer for the

program are paid 7½% above regular salary, plus overtime for the training program. Claremont now has 15 CTOs as they are called, or cross-trained officers, who attend a six week fire academy at Chaffey College. The program was designed to fit Claremont's particular needs and financial abilities.

Mulrooney said he believes the program would certainly not suit all cities and would be politically impractical at the county level. He said that a number of similar programs, however, have been effective in cities. Sunnyvale, for example, has for years had a single public safety department containing both police officers and firemen. Evanston, Illinois, like Claremont, uses police officers for fire duty.

Mulrooney reported that in another effort to provide better fire protection, the cities of Claremont and Pomona entered into a first alarm mutual aid agreement in 1969. Claremont now purchases fire dispatching and communications maintenance services from Pomona.

Mulrooney feels that cities and counties will have to take strong steps to gain control of fire department costs. He sees several alternatives as available. One which may be attractive to some cities is annexation to the district. Another is a program such as Sunnyvale's. He believes one of the most promising and practical in metropolitan areas lies in inter-city cooperation and consolidation. He has therefore been a strong supporter of the seven city fire study conducted in the Pomona Valley this year, which is exploring alternate ways to get better utilization of fire manpower and equipment among the various cities. (This study was described in Chapter XII.)

Perry Scott, City Manager of Santa Monica, stated that he was opposed to including Santa Monica in a regional system of fire protection because size alone does not guarantee economy. It is often true, he said, that very large

organizations are as inefficient as the very small. It is probable, he believes, that the greatest economy in the fire service can be achieved through improvements in technology and in operating methods.

The magnitude of the problem of economics associated with fire service operations, Scott said, is most clearly demonstrated by the relationship of time expended for emergency operations to total duty time of fire fighters. Training, fire prevention, equipment maintenance and housekeeping account for the greater portion of the activity period during a fireman's tour of duty. It is probable, he said, that few fire departments, large or small, would lay claim to utilizing more than about six hours for these functions out of each 24-hour tour of duty. Actual portal to portal emergency response time would average about 2% of each 24-hour tour of duty.

The time distribution problem, Scott stated, is not the fault of the fire fighters, but the nature of the fire service. Surely, at some point, successful programs can be developed for a greater utilization of total duty time available. Some cities have successfully combined police and fire operations and cross-trained policemen for fire duty. However, such programs will be of limited value until they are more readily accepted by the uniform work force.

A major objection, Scott emphasized, to the creation of a regional fire protection system is the increased political clout it would give to the fire fighters. To put all firemen into one county-wide department would give the fire fighters tremendous political strength. Historically, associations of fire fighters and peace officers have exercised a great deal of political influence at the local, state and national level. The favored treatment accorded firemen and policemen in virtually every state in the union as a matter of law should be ample evidence that political clout has been effectively used. In

California there are more special benefit laws for firemen and policemen than for any other class of employee.

For example, Scott pointed out, Section 4850 of the Labor Code requires payment of full salary for up to one year to firemen and policemen for service connected disability. The law requires no test of earning capacity for the continuance of disability payments during that year. The fact that an agency may establish that the employee is working actively at another occupation in industry, or in his home, will not reduce or discontinue payments.

Other employees, he said, in the absence of special local legislation, must rely entirely upon workmen's compensation in the event of disability, which provides only a fraction of the regular wage on a temporary or a permanent disability. If further evidence of political clout is needed, Scott stated, one only needs to examine the total benefit package of policemen and firemen in relationship to other classes of employees. Computed on the same basis as the National Chamber of Commerce survey, benefits other than wages frequently equal 50% of base pay for firemen and policemen as compared with an average in private industry in the neighborhood of 30%.

John Phillips, City Manager of Pasadena, agrees with Scott that large organizations cannot compare in efficiency with small organizations, providing that the small organization is of sufficient size to assign the required manpower to specialty areas such as training and fire prevention. The Pasadena Fire Department, he said, with over 150 employees, has this capacity, and its service is excellent. He also believes strongly that a regional fire department would be extremely vulnerable to union pressure and the threat of strikes. A third argument against a regional system, he stated, is the local control issue. A city, he said, must be able to control the level of service and the cost.

Phillips believes, however, that smaller fire departments, particularly those with less than 50 employees, should study ways to consolidate their operations. Inter-city consolidation or contracting fire services from another city, he believes, offer the best alternatives. They enable smaller cities either to pool their resources to establish more effective fire service or to take advantage of the superior resources of a neighboring city, and they avoid the problem of becoming too large and cumbersome for optimum efficiency.

Phillips also pointed out, as did several other city officials, that the County could perhaps derive cost and service benefits by contracting with cities for service to those unincorporated areas which are adjacent to or surrounded by cities and which are remote from the rest of the district. For example, Altadena, which is isolated from the rest of the district, could perhaps be more effectively and economically serviced by the Pasadena department on a contract basis with the County.

James D. Williams, Assistant City Administrator of Inglewood, emphasized the same point. "In lieu of consolidation of fire districts," he said, "and the inclusion of cities within the existing fire districts, consideration should be given to contracts between city fire departments and adjacent County islands. For example, the Inglewood Fire Department could easily supply improved fire protection to the Lennox area to our south. This could be accomplished without the addition of any equipment or manpower to the Inglewood Fire Department and, at the same time, improve the AlA grading class of the Lennox area."

Edward J. Ferraro, City Manager of Torrance, expressed particularly strong sentiments about the advantages of local control. City departments, he believes, are much more responsive to local issues and can better provide a tailor-made service suited to the particular needs of each city.

Ferraro previously served as City Manager of Lawndale, a district city. In Lawndale, he said, the district was continually transferring the key personnel just at the point when they became familiar with the Lawndale area and people.

Ferraro believes there is significant value in firemen living in the city and participating in city activities. Torrance fire personnel5 for example, sit in on the Plot Plan Review Board's meetings and thus assist in effective planning of new developments. The loyalty of the firemen is to the city, he said, not to another agency, and they are free to respond to the community's problems. The loyalty of the district firemen must first of all be to the district. Thus a city department, unlike the large, sprawling, district organization, operates as a small, fast-reacting organization, immediately responsive to local needs and intimately involved in the life of the community.

Fred Sharp, City Manager of Pomona, is another city official who believes that one of the major problems in district service is the threat of union pressure. Like other city officials of independent cities, he believes there is protection in fragmentation because fire protection and prevention service in communities are not similar. Moreover, he said, because city councils are closer to the people, they are under greater pressure to control government costs and have therefore taken a stronger stand against unreasonable union demands than the Board of Supervisors.

Sharp also criticized what he called the "blight of bigness" in the district operation. The history of large departments, he said, indicates that they are not innovative. Fire Chiefs on the whole have not been innovative. There is a much better chance of developing new technologies and putting them into practice in the smaller non-bureaucratic departments than in the large departments.

Gerald C. Weeks, City Manager of Monterey Park, expressed a similar view that the best chance to improve the fire service is through the efforts of each individual city rather than attempting to modify a large, extremely complex, and slow to change County-wide organization. For example, he said, not only should fire departments handle fire suppression and prevention inspections, fire department personnel should be trained to handle other related duties as well. The size of the County's Consolidated Fire District, Weeks believes, presents some serious problems in the operation of the district, problems evidenced by the difficulty of the Board of Supervisors and County administrative personnel to control costs at the County level.

Last year's tax increase, he emphasized, of nearly ten cents from $ .6500 to $ .7499 per $100 assessed valuation to cities which are in the County Consolidated Fire District indicates the difficulty of the individual cities to control the County costs which their citizens have to pay.

Although Monterey Park has a small department relative to the County with three stations and 54 uniformed employees) Weeks feels the city has adequate fire protection. The availability of fire resources is enhanced, he said, by the city having mutual aid agreements with surrounding cities as well as Los Angeles County.

In our interviews with independent city officials, a number of officials expressed the belief that the district tax levy does not reflect the true cost of the district service because the County charges a disproportionate share of departmental costs, both direct and indirect, to the general fund. For example, these officials said, all officers above the rank of captain are charged to the general fund, even though the majority of them are assigned wholly or predominantly to district operations. Men and equipment from the Forester and Fire Warden are also commonly used for district responses without proper

reimbursement. In this way, according to these officials, the district tax levy is kept low so that it will remain attractive not only to cities within the system but to cities considering annexation. The general fund, they say, is thus being used to subsidize district operations. Consequently, they conclude, taxpayers in the independent cities are paying part of the cost of fire service to district cities.

Not all independent city officials, however, are critical of the district system. Joseph N. Baker, City Manager of Burbank, believes that most cities will be forced out of fire department operation by rising salary and equipment costs and untenable manpower situations. The district, he said, is the approach of the future. With effective management, he believes, a large organization can take advantage of economies in the assignment of manpower and the use and purchase of equipment which are not available to smaller organizations. Baker estimates that Burbank would save approximately $100,000 annually in fire service costs by joining the district.

Lohn Ficklin, recently retired Chief Administrative Officer of Beverly Hills, is another official who feels that the district system offers the best program for the future. Ficklin stated that 80% of the people in Beverly Hills want their own fire department, as do the city council members. Nevertheless, he stated, only through a district system can fire facilities be located effectively and manpower used efficiently.

It is true, he said, that operating problems increase as an organization increases in size. These problems, however, can be resolved through effective decentralization of decision making, proper delegation of authority and appropriate use of management control principles. Ficklin discounted the argument against district enlargement because of union problems. All cities, he said, are going to have to face these problems, and fragmentation is no insurance against them.

The views of these two officials, however, are not those of the majority of independent city officials. To sLmarize, the majority believe that the cities can provide a more responsive level of service at a lover cost than is possible through the district system. They believe the smaller departments can operate more efficiently, and that the large size of the district organization results in inevitable waste and inefficiency. Moreover, the district, because of its size, is vulnerable to union pressures and the threat of strikes; enlargement of the district will only increase this vulnerability. Many of these officials also believe that the district has been able to provide service to cities at an attractive cost because the County general fund is being used to subsidize district operations. Some city departments, they recognize, are too small and their tax base too limited to provide the resources and manpower required to maintain a high level of fire service. The solution to this problem, however, according to the majority of these officials, is not annexation to the district, but either inter-city consolidation of fire services or contracting fire services from a neighboring city. The prevailing theme of these officials is that their governments are close to the people and responsive to their needs. It is therefore imperative, they believe, that cities continue to control the cost and level of so important a municipal service as fire protection.

XVI. REGIONAL FIRE PROTECTION DISTRICT WITH VOLUNTARY MEMBERSHIP BY JURISDICTION - COMMITTEE COMMENTS

Clearly there are major differences of opinion among city officials over the relative advantages and disadvantages of the district and independent city fire protection systems In this chapter we present our own comments directed toward what we believe to be the major questions which city officials raise about the operation of the Consolidated Fire District. These are:

1. The subsidy question. Is the County general fund being used to subsidize district operations?

2. The size question. Will enlargement of the district create an organization too large and cumbersome for efficient operation?

3. The union question. Will enlargement of the district lead to undue influence by the union in district operations, in particular, the determination of salary rates and working conditions?

4. The contract question. Should the County contract with cities for fire service to unincorporated areas and islands which are isolated from the rest of the district?

5. The cost question. Could some independent cities reduce the cost of their fire service by joining the district?

6. The expansion question. Is there a limit to the number of cities the district can effectively annex during a given period?

7. The control question. Should the composition of the governing board of the district be changed to include representatives from district cities?

8. The City-County question. Would the consolidation of Los Angeles City and Los Angeles County fire departments achieve cost and service benefits?

The Subsidy Question

As we reported in the previous chapter there is a widespread belief among officials of independent cities that the County general fund subsidizes Consolidated Fire Protection District operations. A number of city officials

whom we interviewed believe, for example, that the department charges a disproportionate share of both direct and indirect costs to the Forester and Fire Warden and so to the general fund. Another common charge is that the department often uses men and equipment from the Forester and Fire Warden to respond to district fires without proper reimbursement to the general fund for this assistance.

Because of the seriousness of these charges we conducted an intensive study of this subject. A detailed report of our findings is presented in Appendix D. Following is a summary of these findings.

The charge that the general fund subsidizes district operations results, in part, from the fact that the County Forester and Fire Warden is by County Charter responsible for supervising all of the County fire protection districts, and carries the title of Chief Engineer, Fire Protection Districts. This is in addition to his duties as Forester and Fire Warden.

For reasons of administrative convenience and economy, the various districts and the Forester and Fire Warden operate as a single organizational unit commonly referred to as the “County Fire Department." However, since the districts and the Forester and Fire Warden are separate legal entities, their budgets, salary ordinance and salary resolution are separate and distinct documents.

The budget for the Department of Forester and Fire Warden is included in the County general fund budget and the County salary ordinance makes provision for its employees. The districts each have separate budgets which are not included in the overall County budget.

The districts also have their own salary resolution which lists all fireman, fireman specialist, captain, dispatcher and head dispatcher positions.

The County salary ordinance includes all uniform positions from the rank of battalion chief to that of County Forester and Fire Warden. In addition, all of the civilian positions which provide support and related services for both the Forester and Fire Warden and the districts are included in the County salary ordinance, and are initially funded in the Forester and Fire Warden budget.

The individual budgets of the various fire protection districts are charged for services provided by line and support fire fighting and civilian positions which appear in the Forester and Fire Warden budget. This is accomplished by a service charge from the general fund to the district.

In allocating direct costs between the Forester and Fire Warden and the districts - such as those for training, fire inspection and dispatching - the County uses a yardstick system based upon established workload factors - number of men trained, number of hours worked, number of calls received, and so on.

In allocating indirect costs, including the salaries of chief officers and all overhead personnel involved in administrative and special service activities, prorata percentages have been established which reflect the department's best estimate of the time the employee devotes to each service. These are reviewed and are brought up to date annually to reflect organizational changes. In no case is the salary of any officer allocated wholly to the Forester and Fire Warden if he is involved in any manner with district operations.

Equipment and capital improvements are budgeted on a direct line basis in each of the specific budgets. Our examination, therefore, reveals no evidence that the County general fund is being charged an inordinate share of the department costs and so is being used to subsidize district operations.

Our conclusions are substantiated by studies conducted by two outside management consulting firms - Arthur Young and Company which conducted a study of this subject for the Grand Jury, and Price Waterhouse which conducted a similar study for the City of Commerce.

In addition, the County Auditor-Controller periodically reviews the accounting procedures and practices of the Department of Forester and Fire Warden and the fire protection districts in order to ensure equity in the distribution of costs between both agencies.

As we have noted, some city officials also believe that men and equipment from the Forester and Fire Warden are used to respond to district fires without proper reimbursement. This practice, they say, results in a general fund subsidy of district operations at the expense of non-district cities.

It is true that a high degree of reciprocity exists between the Forester and Fire Warden and the Consolidated District in borderline areas. Fixed response patterns insure that adjacent district or Forester and Fire Warden engine companies are dispatched without delay to assist whichever organization has the primary responsibility for an emergency.

On major watershed fires, the Forester and Fire Warden relies on available forces from the district as well as from all city departments in Los Angeles County and neighboring counties. However, because of the integrated nature of the County operation, the greater reliance is placed on district assistance. In such cases, the district is reimbursed from the County general fund for the cost of overtime salaries or other out-of-pocket expenses arising directly Out of the particular emergency.

The fire department believes that the general fund portion of its operation benefits from the fact that it can rely on the full resources of the much larger, well-equipped district to provide a reserve capability in the event

of major watershed conflagrations and other disasters or emergencies of a County-wide significance.

Considering the County-wide impact of major fires such as the 1970 conflagration, our conclusion is that the concept of reciprocity between the general fund and district operations enhances the total fire fighting capacity of both organizations without any apparent subsidization of one by the other.

The Size Question

Our analysis of fire department operations in Los Angeles County, presented in Chapters IV to VII, revealed that there is a strong relationship between size of a fire department and its insurance grade. In general, the smaller the department, the higher (poorer) the insurance grade. Our analysis further indicated that due to budgetary limitations, small departments find it difficult to assign the manpower required to maintain effective programs in such specialty areas as fire prevention and training. Finally, our study showed that due to limitations of size, small departments find it difficult to make efficient use of personnel, equipment and facilities.

These conclusions, shared by many authorities in the fire protection field, are further supported by the studies being conducted in Los Angeles County of inter-city consolidation and by the actual consolidations which have been effected in Orange and Contra Costa Counties.

On the other hand, as we pointed out in Chapter VII and as the statements quoted in the previous chapter indicate, many authorities and city officials also believe that a department can become too large, that beyond a certain size it becomes so laden with bureaucratic red tape and inefficiency that its cost effectiveness seriously deteriorates. Most commonly cited as an optimum size is a department serving a city of 250,000 to 300,000 population.

We noted in Chapter VII, however, that there are only three departments in Los Angeles County serving populations over 250,000. Consequently, the evidence is insufficient to prove or disprove this concept, although, as we also noted, all three large departments have very good insurance grades.

Our belief (lacking statistical evidence, it is admittedly conjectural) is that after a department reaches the point where it employs 300 to 400 people, it is not size which is the most significant factor influencing the efficiency of the operation, but rather the managerial performance of its senior officers, especially its fire chief.

There is no doubt that smaller organizations are easier to manage than large organizations. Such problems as establishing effective information systems, assigning personnel and measuring performance, controlling costs, and eliminating red tape are bound to be less severe in a smaller organization.

On the other hand, the much greeter resources available in a large organization and the diversity of its operations enable it to achieve economies which are not open to smaller organizations. Moreover, while operating problems undoubtedly increase as an organization increases in size, these problems can be resolved through effective decentralization of decision making, proper delegation of authority and appropriate use of management control principles, as Lohn Ficklin, quoted in the previous chapter, pointed out. If this were not so, then we should all still be buying our food at a corner grocery store, and the large corporation would long since have failed in competition with the small shop or factory.

Our conclusion, therefore, is that large and small organizations each have their advantages and disadvantages. Consequently, the most important ingredient in the effective operation of a fire department is not its size - assuming it is of sufficient size to marshal adequate resources - but rather the individual intelligence and capabilities of its management.

The Union Question

Of the 2118 uniformed personnel in the Los Angeles County Fire Department, over 907. are members of the Los Angeles County Fire Fighters Union, Local 1014. The Union, which is affiliated with the County Federation of Labor, AFL-CIO, also represents the firemen in several of the smaller cities in the County which operate their own fire departments.

Many independent city officials, as the statements quoted in the previous chapter indicate, believe that the district because of its size is vulnerable to union pressures and the threat of strikes. Enlargement of the district, they believe, will only increase this vulnerability.

There is protection, these officials say, in fragmentation, since it is more difficult for unions to organize and bring pressure against a number of separate agencies than against a single agency. A single regional fire department, they feel, would be especially vulnerable to such pressures.

These statements raise questions which are difficult to analyze objectively. Collective bargaining between management and unions is a relatively new phenomenon in the public sector and there is little actual experience to rely on. The evidence to date, however, does not appear to support the contention that there is protection in fragmentation, if this statement means that local governments can avoid union problems through the maintenance of small-unit, independent operations.

The unionization of public employees and the establishment of collective bargaining procedures in the public sector is currently the fastest growing movement in the labor relations field. One out of every 12 union members is now a government employee, and the number is increasing by 1000 new members a day. Moreover, of the 11.5 million government employees who belong to unions, three-fourths work for state or local governments. We conclude, therefore, that

public agencies at all levels will be increasingly confronted with union-management problems, and fragmentation will provide little insurance against them. The Teamsters Union, for example, has recently organized the fire fighters in the City of Montebello and is actively engaged in organizational campaigns in a number of other city departments in the County.

However, if city officials mean that the present multi-jurisdictional system is less vulnerable to the threat of a strike than a single regional department would be, we believe they raise a valid question. Under the present multi-jurisdictional system, if a fire department in one city were to call a strike, that city could expect neighboring cities to provide assistance and protection if they could. In contrast, under a regional system, there would be no other agency capable of providing such assistance.

On the other hand, if the current trend toward unionization of city departments continues, the distinction between a single regional system and a multi-jurisdictional system could turn out to be mainly academic. If most departments were unionized, and if a strike occurred in one department, it is not likely that firemen in other departments would consent to act as strike breakers or vote to cross picket lines. In any event, with so little actual experience to rely upon, any attempt to answer the question of the relative vulnerability of the two systems to the threat of a strike tends to become extremely conjectural and theoretical.

Similarly, it is difficult to answer with finality the related but more immediate question which city officials also raise. If the district is enlarged, will not a larger and stronger union be in a position to exert undue influence on district operations, and, in particular, on the negotiation of salary rates and working conditions?

The answer to this question will depend to a great extent on how effectively the County's recently adopted Employee Relations Ordinance functions in the future to maintain a fair balance between union and County interests.

This ordinance, adopted in September, 1968, was developed by three labor relations experts whom the County hired as special consultants. Head of the group was Benjamin Aaron, Professor of Law and Director of the Industrial Relations Institute at UCLA. Currently, the County has again retained Professor Aaron and his group to review the operation of the ordinance during the past three years and to make recommendations for changes if necessary.

The ordinance provides for the establishment of employee representation units, election procedures to determine which union will represent each unit, negotiating procedures on salaries and working conditions between union and County representatives, grievance procedures, a list of unfair employee relations practices, and provisions for mediating and fact finding in the event of an impasse in negotiations.

The ordinance also established an employee relations commission, composed of three members, which is responsible for administering the ordinance, deciding contested matters involving the ordinance, and appointing mediators or fact finders in the event of an impasse.

For the first time the salary recommendations presented last year to the Board of Supervisors by the Director of Personnel were the result of negotiations between union representatives and County management. As we have noted, many city officials, from both district and independent cities, have protested that the 11% salary increase negotiated for most fire and sheriff personnel was excessive.

On May 9 of this year the Director of Personnel submitted salary recommendations for the fiscal year 1972-73. As in the previous year, these

recommendations were the result of negotiations which county management had conducted with union representatives. Two weeks later, after conducting a public hearing, the Board of Supervisors approved the recommendations.

The average salary increase for 41,000 employees in 22 bargaining units where either final or tentative agreements had been reached was 3.9 percent. For 23,000 other employees in 22 other bargaining units negotiations were at an impasse and the procedures for mediating and fact finding have been invoked. No salary increases were recommended for deputy sheriff or fireman positions.

Whether one considers the raises which have been negotiated over the past two years as excessive or not, it seems evident that two years experience with negotiating practices under the ordinance is too short a time to reach definitive conclusions about the future effectiveness of the ordinance.

To be effective, a collective bargaining system must seek to establish an equitable balance of power between the contending parties - unions and manage-ment. If it does not, the more powerful party inevitably will establish its interests over those of the weaker party. The result is exploitation by one party over the other - in a government environment exploitation either of employees by government managers or the exploitation of the government's taxing authority by the employees.

Thus, only future experience with the Employee Relations Ordinance can determine whether the fears of city officials over undue union influence in district operations are legitimate. Until further evidence is in, therefore, the union question must remain open.

The Contract Question

In our interviews with independent city officials, several expressed the belief that certain unincorporated areas which are adjacent to or surrounded

by independent cities might be served more effectively and economically by one of these cities under a contract with the Consolidated District. In the previous chapter we quoted John Phillips, City Manager of Pasadena, who suggested, for example, that the Pasadena fire department could perhaps serve the unincorporated area of Altadena more effectively and economically than the district forces. We also quoted James D. Williams, Assistant City Administrator of Inglewood, who made the same point regarding the Lennox area, a small unincorporated island which borders Inglewood on the south.

It may be true that some cost savings or imprQved service might be achieved through contract arrangements of this type. We believe, therefore, that County officials should explore with concerned city officials the use of the contract device, in areas isolated from the district, to determine if costs can be reduced or service improved.

We should note, however, that there are only a few unincorporated areas throughout the County which are actually isolated and remote from the rest of the district. Therefore, even if some reduction in cost were possible through use of the contract device, the savings could not be very significant.

Moreover, the proposal that the district contract in some areas for fire services would do little to overcome the major problems in the present multi-jurisdictional fire protection system. The region would still be left with the present maze of 43 separate fire fighting agencies with all the consequent problems which this many-unit system generates. Our analysis thus has indicated that the only alternatives which give promise of producing significant cost and service benefits are those which will reduce this multitude of jurisdictions through some form of actual consolidation of fire fighting forces.

Therefore, while we believe that any proposal which might reduce costs or improve service should be explored, our conclusion is that contracting by the

district would have only a minimal effect in resolving the major problems resulting from our present compartmentalized, many-unit fire protection system.

The Cost Question

In Exhibit 6 we present total expenditure figures on fire departments in Los Angeles County, as estimated for the fiscal year 1971-72. Using the 1971-72 tax levy of the district, which was $ .7499 per $100 assessed valuation, we can estimate what a city would have paid for fire services if it had belonged to the district. We can then compare this estimate of the cost of district service with the estimated expenditure figure reported by each city for its own fire department. This information is presented in Exhibit 9.

As we emphasized in our discussion of fire department costs in Chapter VII, these figures should be treated with extreme caution for a number of reasons. First) they do not indicate the relative level of fire protection service which a city is providing. Thus, a city which is providing a high level of service may compare unfavorably on a cost basis with the district; in contrast, a city providing a lower level of service may compare favorably - especially a city using volunteer fire personnel. For this reason, we have included a column in Exhibit 9 showing the insurance grade of each fire department.

However, we should caution also that the insurance grade, as we explained in Chapter III, does not directly measure the quality of performance of a fire department on day-to-day fire operations, but is rather a device used for insurance rating purposes to measure the ability of a department to prevent an extensive fire.

Second, we cannot determine what effect a number of other important operating factors have on these cost figures - the individual capability of the department's management; the size, age, and the type of structures in the community; the nature of the terrain; the seasonal weather conditions; and so on.

Finally, the cost measure of $100 per assessed valuation contains hidden variables, the effects of which cannot be accurately determined. Because district costs are assessed on the basis of a uniform tax rate applied against assessed valuation, cities with a high assessed valuation will pay relatively more for district service than cities with a lower valuation.

It is true, as Robert Williams, city Manager of Santa Fe springs, has pointed out, that cities with higher assessed valuations probably should pay relatively more for the service, since they have more to protect and therefore require a higher level of service. At some point, however, the increased cost resulting from the levy against assessed valuation may exceed the value of the additional service received. Thus a city with a high assessed valuation which joins the district may tend to subsidize the cost of fire service for other cities in the system with lower assessed valuations.

In examining Exhibit 9 it is also important to keep in mind that the annexation of any particular city to the district may significantly affect the cost of operation of the district. That is, the additional revenues which the tax levy against the new city will bring in at the current level may either exceed or be less than the cost of the services provided to the new city.

In the case of a large city, in particular, with complex fire protection problems, the cost is likely to exceed the additional revenues. As a consequence, the tax levy for the next fiscal year would need to be increased. The projected savings for the city, then, which were based on the current tax levy could be entirely wiped out.

The very substantial difference, for example, between the estimated district cost and the actual expenditures for the City of Los Angeles is almost certainly unrealistic. It does not take into account the highly complex fire

protection problems in that city which undoubtedly would raise the cost of district service substantially. Consequently, if Los Angeles City joined the district, it is questionable whether the additional revenues received at the current tax rate would be sufficient to offset the additional cost of protection.

Therefore, anyone examining these cost figures should be careful about interpreting them in terms of the cost effectiveness of any given department. They provide an indication only that some cities now operating their own departments could expect to reduce their fire protection expenditures by joining the district. Others apparently could not. In addition, some cities which now provide a limited level of service could expect to improve their service level, although they might increase their expenditures.

As we have emphasized in this report, it is the responsibility of each city to make its own decision about how fire protection service should be provided to its citizens. The significant savings which our analysis indicates some cities might realize if they joined the district, however, should offer a strong inducement to these cities to examine closely the possible advantages of district service.

The Expansion Question

As we noted in Chapter XV, the annexation to the district by Glendora, Maywood, signal Hill, Huntington Park, and Bell resulted in the closing of two fire stations, a reduction of 49 positions, and the elimination of 27 pieces of apparatus and automotive equipment. The officers and firemen in the 49 excess positions were transferred except in a few cases where an individual resigned or retired - to fill vacancies then existing in the district organization. These vacancies would normally have required the recruitment and training of new firemen.

The district usually has approximately five percent of its budgeted positions vacant at any given time, 50 to 100 positions on the average.

Obviously, then, unless the district changes its current policy in annexations of insuring city firemen positions in the district, its ability to absorb excess city firemen is limited.

If the district annexes cities beyond its capacity to absorb the city firemen, excess positions will be created causing increased costs and an eventual increase in the tax levy. In this event, the district could expect strong complaints from cities already in the district, who in effect would be subsidizing the cost of the surplus positions through an increased tax levy.

Thus, unless the present personnel policy is changed, the annexation of cities to the district is forced by economic circumstances to be a gradual program. Further, it is not likely that the County would consider changing its present personnel policy. It is a reasonable and responsible one which recognizes the County's obligation to treat the city firemen involved with appropriate consideration. It is also a practical one, since failure to treat firemen with consideration in one annexation would generate intense and vigorous opposition by city firemen in other jurisdictions to any proposed annexations in the future.

Considering the above factors, it is clear that as the district is currently structured, any acceleration in the number of city annexations must be programmed gradually over a period of years.

The Control Question

In the previous chapter we quoted Mayor James Roberts of Huntington Park. "While the city is receiving the service it wants," he said, "and the district response to the city's requirements has been excellent, we have no control over the increase in the cost of those services. If the district service is to remain attractive in the future, then the district must maintain effective control over district costs." Specifically Mayor Roberts was referring to the

tax rate increase in the di5trict from $ .065 to $ .7499 per $100 assessed valuation which occurred last year. As we have noted, many city officials whom we interviewed referred to this increase and are convinced it was a result of the major salary increases which were given to firemen in April, 1970 and July, 1971.

Our study indicates that the 117. salary raise given in 1971 increased district costs by over $3 million or $ .0923 per $100 of assessed valuation. Other operating requirements such as additional personnel for new stations, new equipment, increases in services and supplies, and mandatory additions to the general reserve accounted for an increase of $ .2097. These increases were offset by a rise in assessed valuation and a carry-over of surplus from the previous year which reduced the net increase in the district tax rate to $ .0999.

Thus, while the salary raise was not the sole cause) it was a significant factor in the unprecedented tax rate increase) and one which could not easily be counteracted by economy measures because of the inevitable budgetary pressures created by normal growth of the district.

The city officials who have criticized the salary increase as excessive also complain that they had no prior knowledge of the County's bargaining position until the salary recommendations were presented formally to the Board by the Director of Personnel.

Although the Board has the authority to modify or reject the recommendations of the Director of Personnel it would have been extremely difficult to do so at that point in the salary setting process for a number of reasons. First, the guidelines for the County's bargaining position had been established by the Board in conference with the Director of Personnel and the Chief Administrative Officer prior to actual negotiations with employee representatives. Second, it would have necessitated a whole new round of salary negotiations under very adverse conditions created by this action. Third, and probably most

important of all, it might well have precipitated a complete breakdown of the County's Employee Relations Ordinance as an effective instrument for successful collective bargaining and set the stage for a return to the political pressure system of salary setting which the new ordinance had been designed to replace.

This year steps have been taken to correct the previous year's breakdown in communications. County administrators, including the Director of Personnel, are taking part in a technical task force set up by the League of California Cities, Los Angeles County Division. Furthermore, committees of elected city officials have met individually and collectively with members of the Board of Supervisors and have been made aware of the County's position in salary negotiations for the 1972-73 fiscal period.

These steps on the part of both city and County officials to improve communication channels are to be commended. Nevertheless, to avoid serious misunderstandings and friction in the future, we believe more formal channels of communication and decision-making must be established between district city officials and the County.

District cities now contain a total population of 887,000. This is nearly 49 percent of the total population served by the district. If the district is to continue to offer an attractive alternative to independent city operation, the officials of the district cities should be given an appropriate voice in the key decision-making processes of the district.

We recommend, therefore, that the Board of Supervisors instruct the Chief Administrative Officer, the County Counsel, and the Forester and Fire Warden to study the feasibility of amending the present Fire Protection District law to enlarge the governing board of the Consolidated Fire District. The governing board now consists of the five supervisors. We recommend that this membership be expanded to include four city representatives.

We believe the Board of Supervisors should retain its majority status on the governing board since it is the only agency with district-wide responsibility. The city representatives therefore should not exceed four members. Nevertheless, including four city representatives on the governing board would clearly give them a formal communication channel and an opportunity to participate in the major policy and management decisions affecting the district.

One method of selection of the city officials could be to divide the district into four reasonably contiguous, geographical areas. The city councils of the cities in each area could then elect the representative for their area.

We make this recommendation on the premise that this change can be accomplished without hampering the effective operation of both the district and the Forester and Fire Warden. Since these two entities operate under a common administration which enables them to avoid much duplication in. the assignment of men and equipment, we believe that this arrangement should by all means be preserved. Therefore, before the County sponsors an amendment to enlarge the governing board of the district, it should clearly determine that such legislation would not impair the present day-to-day administration of both the district and the Forester and Fire Warden.

If this change can be made without creating significant legal and operating problems, we believe that it would go far in correcting a major criticism of the present district operation. This is that once a city joins the system, it loses control over the cost and level of services provided to it.

The City-County Question

A merger of the two large fire departments of Los Angeles City and County has been the subject of speculation and debate for many years. No constructive steps have been taken, however, to evaluate the advantages of such

a consolidation or even to isolate and examine the problem areas which might be encountered in achieving it.

Our analysis indicates that as many as eight district and Los Angeles City fire stations could be closed by consolidating the two departments and eliminating present overlapping of response areas. Further savings could be effected by combining dispatching and communication facilities and consolidating such administrative and auxiliary service functions as personnel administration, accounting, budget preparation, research and planning, warehousing, and supply services.

Because of the size of these two departments, however, and the diversity of their operations - particularly those of Los Angeles City - a detailed and in-depth study is required before accurate predictions can be made on the possible cost and service benefits which a merger might achieve. Such a study, if it is undertaken, should be conducted as a cooperative effort by City and County officials. We limit our comments to the problems which we believe must be resolved before a merger of the City and County departments can be successfully accomplished.

The Department of Fire of the City of Los Angeles is widely recognized as one of the finest organizations of its kind in the United States. Its jurisdiction encompasses every phase of fire prevention and suppression associated with a metropolitan fire service, including harbor installations and airport facilities which rank with the largest in the world. As mentioned in Chapter III, the department has been graded Class 1 by the Insurance Services Office. Los Angeles is one of only five cities in the United States with a Class 1 fire department grading and a Class 2 city fire protection classification. The others are Bakersfield and Stockton in California; Cincinnati, Ohio; and Memphis, Tennessee. (See Western Fire Journal, January, 1972, p. 5.)

In the 1971-72 fiscal period, the City of Los Angeles estimates that it will spend $80,347,959 for fire protee:ti6n. Based upon this figure the cost per capita is $28.60, slightly higher than the average of $24.80 for the other 41 cities. The cost per $100 of assessed valuation is $1.03, substantially above the average of 80 cents for all the cities which operate their own fire departments and the 75 cents for the Consolidated District. (See Exhibit 7.)

These cost figures are somewhat misleading, since they include the cost of fire protection for the City's harbor and airport facilities, and for the operation of the city's ambulance service. The harbor and airport operations are independent authorities and were intended at the time of their creation to be entirely self-supporting. So far, however, the City has received very little in reimbursement for their fire protection.

Although it is not a fire-rescue operation, the City ambulance service is funded and administered by the fire department. Normal rescue service is provided by 27 ambulances - 14 operated by firemen and 13 operated by non-firemen. If an ambulance is not readily available, a fire engine (all of which carry rescue equipment including resuscitators) is dispatched to handle the call until an ambulance arrives. The cost of this service is billed on a fixed fee basis to those using it. Of the $1,400,034 billed for this service in 1970-71, only $487,513 was collected. None of this revenue is used to directly offset the fire department cost of providing the service.

If the actual cost of these services in 1970-71 is deducted from the estimated cost of the City's fire protection in the current fiscal period, the per capita cost is reduced to approximately $26 and the cost per $100 of assessed valuation is reduced to about $0.93. Another reason, as we noted in Chapter VII, for the City's relatively high cost measures is its Class I insurance grade. As we have showed, maintaining

a low insurance grade costs money. However, low insurance grades in general are also accompanied by lower fire insurance premiums for property owners. Without the benefit of an extensive analysis of insurance costs, however, we cannot evaluate the cost benefit of this favorable insurance grading to City residents.

Finally, as we also noted in our discussion of the relationships of cost, insurance class, and city size in Chapter VII, the Los Angeles City department assigns five to six men to all engine companies. This is in contrast to the three and four man companies normally used by other cities and the district. This difference in manning standards is a significant factor contributing to Los Angeles City's fire protection costs.

Besides these complex questions involving costs, there are other practical considerations which require thorough analysis before anyone can reasonably predict if merging of these two departments will produce significant cost and service benefits. For example, in the case of the five cities which have annexed to the Consolidated District since 1967, nearly every city fireman received an increase in salary and improved fringe benefits. Position classifications in the small city departments closely paralleled those of the district, so that appropriate placement of the transferring firemen has presented little or no problem in the transition from city to district fire protection.

Merging Los Angeles City and district firemen would doubtless be more complex. With regard to position classifications, in 1970 the Los Angeles City Council adopted the "Jacobs Plan," a personnel merit system which established a new set of position classifications and pay levels. Under this plan position classifications include one level each of auto firemen and of engineer, two levels of firemen, and two levels of captain. The selection process for the allocation of personnel within the firemen and captain classifications is handled in most cases by the department and is based upon work assignment.

Combining this system with the district system consisting of only three classifications - fireman, fireman specialist, and captain - could be extremely difficult with a high potential for creating serious employee morale problems.

Equally critical in the transition of personnel would be the transfer of employee retirement benefits. The County has. reciprocal retirement plan agreements with most of the cities in the County. These agreements facilitate the movement of employees from one jurisdiction to the other with little or no loss in retirement benefits. The County has no such reciprocal agreement with Los Angeles City.

The City has its own retirement plan for police and fire personnel. There are, in fact, two plans now in effect. One includes those employees who joined the police or fire departments prior to January, 1967. The other includes those who were hired since that time and those who elected to transfer to this new system at its inception.

Further complicating an equitable transfer of retirement benefits is the City's 70 year amortization program designed to make its retirement plans actuarially sound. The estimated cost of this amortization program to the City in 1971-72 for firemen alone is $12,989,838. If the two departments were merged, some equitable arrangement would have to be made to liquidate this obligation in a manner acceptable to both agencies. Since a substantial amount of this amortization charge should have been allocated in previous years, we have not included this expenditure in our estimate of the City's 1971-72 fire protection costs.

Our purpose in identifying the serious problems which we believe would be encountered in any plan to merge the two large departments is not intended to preclude or forestall any effort in this direction. We believe, however, that consolidation of the Los Angeles City and County departments should be

approached with a full awareness of the complexities involved and the need to conduct a thorough analysis of all the factors affecting possible cost and service benefits.

At the same time, we would also emphasize that even though it might prove advantageous to City and County taxpayers, we do not believe that consolidation of these two large departments now is critical to the eventual evolvement of a rational fire protection system throughout the County. More important at this time is a reduction in the number of small fire departments and the elimination of the maze of Jurisdictional boundaries.

XVII. CONCLUSION

It has been our intent in this study to provide a factual and objective review of fire protection services in Los Angeles County and to analyze the relative merits of possible alternatives to the present system.

We pointed out that there are presently 43 separate fire departments in Los Angeles County - the two large departments of Los Angeles City and Los Angeles County and 41 other city departments. Among the 41 city departments only Long Beach with over 400 employees is of major size. All other departments employ less than 200 firemen, and many of them employ no more than 30 to 40 firemen operating out of only one or two stations.

In the early chapters of this report we described in detail the many problems which result from this maze of separate jurisdictions providing fire services to one metropolitan region. We pointed out that if the boundaries of the 43 Jurisdictions which operate fire departments could be ignored, as many as 48 of the 378 fire stations now in operation could be closed with no deterioration in service. We estimated that the elimination of these stations Would save from $8.7 to $10.9 million in operating costs) and approximately $7.2 million in capital and equipment investment costs.

In addition to creating excessive costs, we pointed out that the present system also generates serious operating deficiencies. It does not guarantee that available equipment will always respond to an emergency in as short a time as possible. It does not guarantee, when more than one agency is involved in a major emergency, that the fire fighting forces from different jurisdictions will communicate effectively with each other in a coordinated team effort. There is no common radio frequency used by all or even a majority of departments.

The present system does not guarantee that the proper amount of equipment will immediately be dispatched to an emergency. It does not guarantee that effective fire prevention programs will be conducted in all areas of the County, including regular fire drill training for schools and hospitals and periodic inspection of residential and commercial structures.

The report then analyzed in detail seven alternatives to the present system which offer cities an opportunity to reduce their fire service costs and at the same time improve its quality.

We rejected three of these alternatives as being either ineffective, legally inappropriate, or minimal in the cost and service benefits which it might produce. These are (1) a voluntary association of independent jurisdictions, (2) a State-mandated fire protection district, and (3) expansion of pre-planned mutual aid programs.

Of the four remaining alternatives, our analysis indicated that all offer cities which now operate their own departments a significant opportunity to reduce the cost as well as improve the quality of their fire services. These alternatives are (1) inter-city consolidated departments, (2) contract service from another city, (3) contract service from a private firm, and (4) the Consolidated Fire Protection District.

We believe, therefore, that the most important effort that can be expended to improve our present system of fire protection service is the individual examination of these four alternatives by each city now operating its own fire department.

As we have emphasized throughout this report, we cannot say which of these alternatives is the best for any city. The answer to that question can only be resolved by each city itself through an individual study of these alternatives in relation to the particular circumstances which affect the provision of fire services in that city.

APPENDIX A

Formal Mutual Aid Pacts

Two major mutual aid pacts are currently in operation in Los Angeles County. These are the Southeast Cities Mutual Aid Fire Pact and the South Bay Mutual Aid Pact.

The Southeast Cities Mutual Aid Fire Pact was formalized in its present form in the early 1950's. Prior to that time, as early as 1934, the cities of South Gate, Lynwood, and Compton had a limited reciprocal agreement covering the area of the Compton and Lynwood Union High School and Grammar School District. Later, in 1941, a formal reciprocal agreement was instituted among eight cities and two adjacent fire protection districts. (At this time there were many small fire protection districts; the Consolidated Fire Protection District was not established until 1949.) By 1970 it had grown to include 12 cities - Bell, Compton, Downey, Huntington Park, Lynvood, Maywood, Montebello, Santa Fe Springs, South Gate, Vernon, Whittier, and La Habra in Orange County. Since that time three of these cities-Maywood, Huntington Park, and Bell have annexed to the Consolidated Fire Protection District.

The South Bay Mutual Aid Pact also evolved out of limited reciprocal agreements over a period of years. It now includes nine cities - El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Manhattan Beach, Palos Verdes Estates, Redondo Beach, and Torrance.

These pacts are formally signed contracts which include operational plans prescribing in detail the action each participating city will take when a member city requests assistance. Both pacts provide for three levels of assistance, called Plans I, II, and III, depending upon the size of the

emergency. The assistance may range from two engine companies dispatched to the other city for stand by in the event of another emergency to as many as four engine companies and one ladder company dispatched to the fire and two other engine companies dispatched for stand by. Alternate response patterns are included in both plans in case a city is unable to fulfill its assigned commitment because of an emergency within its own boundaries.

In the South Bay pact, for example, each participating fire department has a set of instructions and response cards which describe for each city the fire departments which will respond under each plan or the alternate departments in case the assigned department is unable to respond. For example, under a Plan I called by El Segundo, Hawthorne and Manhattan Beach will send an engine company to El Segundo fire headquarters station. If a Plan II is then called, Hawthorne and Manhattan Beach will each send an additional engine company to El Segundo headquarters, while their engine companies committed on the regional Plan I request respond to the fire. Hawthorne will also send a ladder company to the fire. When this happens, Inglewood and Hermosa Beach will each send one engine company to Hawthorne and Manhattan Beach to cover for the companies responding to El Segundo.

The general rules governing the operation of the South Bay pact further illustrate how these pacts operate.

1. A city needing aid calls the dispatcher in a member city who is assigned under the pact to call all assisting departments according to the plan requested.

2. The dispatcher telephones or radios the departments indicated on the response cards for the plan requested, telling them their assignment and receives acknowledgement or obtains an alternate.

3. Equipment responding to other cities comes under the authority of the senior officer of the city involved.

4. The plan is based on the nearest engine companies responding, but the final decision of which engine company responds remains with the city involved.

5. Under normal sequence of plans, engine companies report directly to fire headquarters, and then come under control of that city's dispatcher.

6. All ladder companies report directly to the fire and the officer in charge.

7. The possible maximum equipment depleted from any one city is one engine company and one truck company.

8. All engine companies will have not less than four men.

9. Guides shall be provided for companies entering each city.

10. Each city shall be responsible for calling its off-shift u.n, manning its own reserve equipment and releasing outside equipment as soon as it is prudently possible.

11. Specialized equipment shall be dispatched on request and according to availability.

No fee or charge is made for any services requested under these pacts. It is the responsibility of a city requesting aid to make gasoline, oil, and food available where and when necessary, but each city shall bear its aim costs of operation and insurance on its own men and equipment.

These two formal mutual aid pacts provide a measure of protection beyond that of the other more informal mutual assistance agreements in general use throughout the County. Their principal advantage lies in the provision for a sequential build-up of available fire fighting strength once the need for assistance has been determined by a participating city.

APPENDIX B

Regression and Correlation Analysis of Fire Department Expenditures, Insurance Grade, and City Population

This Appendix summarizes the results of an analysis of estimated expenditures for fire protection services reported by the various jurisdictions in Los Angeles County during the fiscal year 1971-72.

The objective of the analysis was to review the current costs of cities for fire protection and determine whether or not there are reliable and significant relationships among jurisdictions and their costs, insurance grade, and size.

The study was limited in scope and duration, and it was not possible to examine all of the possible relationships. However, the study does focus on widely held beliefs about fire protection expenditures. Inspection of the data suggested the existence of patterns which explain differences and similarities among communities and their fire protection services. Based on the comments of various authorities on municipal affairs and on a preliminary review of the data, hypotheses were formed relating fire service expenditures, city characteristics, and characteristics of the fire service. These hypotheses were evaluated by testing the Los Angeles County data using statistical tests for confirmation or rejection.

Sumary of Conclusions

The analysis confirmed the following hypotheses:

- The insurance grade (between 1-best and 10-worst) of a municipal fire department depends on the level of expenditures. Regardless of the size of the city, higher expenditures relate to improved (lower) grades.

- The population of the city is related both to the grade of its fire department and to the tax rate or "equivalent tax rate" for

fire protection services. The equivalent tax rate is the cost of the department per $100 of assessed valuation. Very small cities (less than 80,000) have lower tax rates and correspondingly poorer insurance grades. Somewhat larger cities (80,000 to 150,000) have better grade., but also higher equivalent tax rates. For cities larger than 150,000 a good grade exists along with a leveling off in the equivalent tax rate.

The evidence in Los Angeles County supporting the following two hypotheses is so weak that they cannot be accepted as meaningful:

- Departments which serve populations above 250,000 tend to have higher levels of expenditure without the benefit of corresponding improvement in the insurance grade of the department. The three departments within the County which serve populations over 250,000 do not provide a sufficient sample to evaluate this statement.

- The level of wealth of a city, as measured by property valuation, is sufficient to explain any advantage or disadvantage it may have in terms of quality or expense of fire protection service. No evidence was found to support this statement.

Data and Analysis

Sources of Data - Published data on municipal expenditures is inadequate and unreliable, primarily because different jurisdictions report expenses on different bases to these publications. Consequently, the committee staff acquired all data by interview or correspondence with city personnel cognizant of fire protection service expenditures. To obtain uniform data and to insure as much as possible that all appropriate costs were included, the staff suggested that city officials use the following outline as a checklist in reporting their data.

FIRE PROTECTION BUDGET
1971-72 Fiscal Period

CITY OF_____

FIRE DEPARTMENT COSTS

Personnel

Salaries
Retirement
Insurance
Other

Maintenance and Operation

Capital Outlay

Total Fire Department Cost

ALL OTHER FIRE PROTECTION COSTS

Other budgeted amounts which may not be included in the fire department budget, such as hydrant rental, debt service, alarm system, maintenance, etc.

TOTAL FIRE PROTECTION BUDGET, 1971-72

Insurance Grade - In our analysis we used the grade assigned to a fire department by the Insurance Services Office (ISO). We did not use the grade assigned to a city. As noted in Chapter III, the department grade does not measure the day-to-day performance of a fire department. It does not measure how well the department responds to incidents or whether the fire suppression force is effective. It is a quality index only in the sense that it represents an independent evaluation of how well-prepared a department is to prevent large and extensive fires, based on standards adopted by the ISO.

Cost Variable - The basic cost variable used was the estimated total expenditure of the department for 1971-72, 88 reported by the city to the Economy and Efficiency Committee as indicated above. The ratios of cost per capita) based on residential population, cost per $100 assessed value, and cost per uniformed employee were used in the analysis. The data is in highly aggregated form; for example, total assessed value was used. Though they may be relevant, we did not consider breakdowns of assessed value by type of property (industrial, commercial, and residential) because this data is not easily obtained.

Population - The population is that reported for each community in the 1970 Federal census. It represents the number of persons who reside in a given community. It may not be the same as the number of persons who are likely to be present in the community during the day.

Analysis - The hypotheses summarized in the first section were tested using standard regression analysis techniques of multivariate statistics. Preliminary correlation analysis was used to provide initial insight regarding potential fruitful paths of detailed analysis. Analysis of variance techniques accompanied the regression analysis to determine the statistical significance of the findings.

Findings

Fire Protection Expenditures and Insurance Grade - The result of the statistical analysis for non-district cities shows that expenditures and expenditure rates are strongly related to the grade of a municipal fire department. Specifically, the best fit formula for relating the grade of a department to its expenditures is the following equation:

$$G = 9.38 - 0.33x1 - 0.20x2 - 2.59x3$$

where

G = lnsurance grade of the department

x_1 = Per capita assessed value (Thousands of $)

x_2 = Expenditures per fireman (Thousands of $)

x_3 = Expenditures per $100 A.V. (Dollars)

The relationship between grade and costs is statistically valid and reliable. For example, in Long Beach, the data in Exhibit 6 shows that:

$x_1 = 2.987$

$x_2 = 24.5$

$x_3 = 0.98$

The formula would estimate the grade as

$G = 9.38-0.33(2.987)-0.20(24.5)-2.59(0.98)$

$G = 2.53$

The actual insurance grade of Long Beach is 3.

City Population and Rate of Fire Protection Expenditures - Literature on the economics of municipal services, and the testimony of many communities, suggest that substantial cost savings are realized by large organizations providing services to large populations rather than many small organizations providing the same service. However, some studies say also that there is a population which is too large - that is, there is a point of diminishing returns. Estimates by experts of the optimum population for which economical fire protection service can be achieved range from 50,000 to 300,000 depending on the expert. Our analysis indicates that there is a relationship between tax rate and population, although the exact nature of the relationship is obscured by the considerable variability of the data. The analysis indicates that the tax

rate for fire protection service of independent cities is generally lower for smaller cities, and increases as population increases, up to a population of 150,000, where it levels off.

There are not enough fire departments in Los Angeles County which serve populations greater than 250,000 to use their operations to measure the relationship between population and expenditures. A conclusive study of large department costs would require examination of large departments throughout the State (and perhaps elsewhere).

Insurance Grade and City Population - Our analysis indicates that the department insurance grade varies with population. According to the analysis, department grade can be predicted by entering population in the equation.

$$G = 1.0 + 0.29e^{-0.027(P-125)}$$

where P = population in thousands

The equation predicts disadvantageous grades for very small cities, gradual improvement to grades from 2 to 4 when population exceeds 50,000, and approaches grade 1 for very large cities.

When grade and equivalent tax rate are examined together, the analysis shows that any economies achieved by larger size tend to be reflected in improved grades rather than in lower costs. Smaller cities have the lowest tax rates for fire protection, but accompanied by the poorest insurance grades. Larger cities, with higher tax rates, have better grades.

There is no evidence in the data to support the contention that costs rise with city population beyond a certain size.

Tax Base and Fire Protection Expenditures - The hypothesis that community wealth, as measured by its tax base, is by itself an indicator of cost and quality of fire service, is not supported by the data. specifically,

assessed value per capita has a non-zero correlation with expenditures per capita and not with other measures of department expenditure or city characteristics. The non-zero correlation with expenditures per capita means only that assessed value per capita is both a source of demand for fire protection services and an indicator of the community's ability to pay.

APPENDIX C

Officials Interviewed

Officials at the time of the interviews were serving in the positions listed after their names. Since the interviews some officials have changed positions as indicated.

City Officials

Keith Abbott, City Manager, Whittier

Joseph N. Baker, City Manager, Burbank

E. Fredrick Bien, City Administrator, Carson

Chapman Bone, City Administrator, La Mirada; now City-County Coordinator, Los Angeles County

Kenneth E. Botts, Administrative Officer, El Monte

Charles B. Briley, Assistant City Manager, Glendale

Grant R. Brimhall, City Manager, Glendora

Harold Campbell, City Administrative Officer, Huntington Park

Robert Christofferson, City Administrator, Covina

Lyman Cozad, City Manager, Arcadia

Robert C. Creighton, Assistant City Manager, Long Beach

Milton Farrell, City Manager, Lakewood

Lohn R. Ficklin, City Manager, Beverly Hills, now retired

Edward J. Ferraro, City Manager, Torrance

Robert Gain, Fire Chief, Downey

Louis Gilbertson, Mayor, Temple City

C. Leland Gunn, City Manager, Rosemead

Raymond Hill, Chief Engineer and General Manager, Los Angeles City Department of Fire

L. C. Husted, Fire Chief, Vernon

Marshall W. Julian, City Administrator, Lakevood; now City Manager, San Bernardino

Harry B. Keebaugh, City Administrator, San Gabriel

Tom Kirchner, Assistant City Manager, Monterey Park

Karl Koski, City Manager, Temple City

Andrew Lazzaretto, City Manager and City Clerk, Walnut

Leonard Locher, Councilman, Maywood

Robert R. Lucas, Fire Chief, Torrance

Nadine McCartney, Director of Finance, Signal Hill

R. D. McDowell, City Administrator, Norwalk

Keith Mulrooney, City Manager, Claremont

Robert H. Nash, Deputy City Manager, Glendora

Lawrence W. O'Rourke, City Administrator, Comerce

John D. Phillips, City Manager, Pasadena

C. Erwin Piper, Chief Administrative Officer, Los Angeles

John D. Pitts, City Administrator, Bell

Ronald Prince, Administrative Officer, Signal Hill; now City Manager, Lynwood

James Roberts, Mayor, Huntington Park

Howard Schroyer, City Manager, Pico Rivera

Perry Scott, City Manager, Santa Monica

F. W. Sharp, City Manager, Pomona

J. G. Smith, Fire Chief, Inglewood

Rod S. Smith, Fire Chief, Whittier

Jack A. Simpson, City Administrator, Hawaiian Gardens

Allan R. Stone, Battalion Chief, Inglewood

B. J. Thompson, Fire Chief, Santa Fe Springs

Charles W. Thompson, City Manager, Downey

Gerald C. Weeks, City Manager, Monterey Park

Robert L. Williams, City Manager, Santa Fe Springs

James Williams, Assistant Administrative Officer, Inglewood

Other Officials

Mark H. Bloodgood, Auditor-Controller, County of Los Angeles

Harry C. Bigglestone, Chief Protection Engineer, Pacific Region, Insurance Services Office (telephone interview)

Donald G. Borthwick, Battalion Chief, County of Los Angeles Fire Department

Dale Carter, City Manager, Scottsdale, Arizona

John Crosby, Chief Telephone Engineer, Comunications Department, County of Los Angeles

Earl Dunn, Former President, Los Angeles County Fire Fighters, Local 1014, AFL-CIO

Max S. Elliott, Chief Engineer, Comunicationg Department, County of Orange

Morton J. Colden, Administrative Deputy, County of Los Angeles Fire Department

John Harris, Director, Los Angeles County Fire Fighters, Local 1014, AFL-CIO

Randy Harrison, Executive Secretary, League of California Cities, Southern California Chapter

James Heywood, Battalion Chief, County of Los Angeles Fire Department

Richard H. Houts, Forester and Fire Warden and Chief Engineer, County of Los Angeles Fire Department

Fred W. Kline, Former President, Los Angeles City Board of Fire Comissioners

Oran S. Lowery, State Manager, Insurance Services Office of California

Lauren B. Marks, Division Engineer, Insurance Services Office of California

Edward J. Martin, Retirement Systems Manager, Treasurer-Tax Collector Department, County of Los Angeles

Ronald L. Mathis, Former Director, Los Angeles County Fire Fighters, Local 1014, AFL-CIO

David D. Mix, Division Chief, County Counsel, County of Los Angeles

Everett B. Millican, 1st Vice-President, Los Angeles County Fire Fighters, Local 1014, AFL-CIO

Raymond Picard, Fire Chief, City of Huntington Beach (telephone interview)

John K. Stephens, 2nd Vice-President, Los Angeles County Fire Fighters, Local 1014, AFL-CIO

A. V. Streuli, Fire Chief, Contra Costa County Consolidated Fire District (telephone interview)

Alfred K. Whitehead, President, Los Angeles County Fire Fighers, Local 1014, AFL-CIO Arthur C. Will, Chief Administrative Officer, County of Los Angeles

Louis A. Witzeman, President, Rural/Metropolitan Fire Protection Co., Scottsdale, Arizona

APPENDIX D

The County Fire District System
Historical Development and Current Operation

Historical Development

The concept of furnishing fire protection to structurally developed unincorporated areas through the formation of special districts was introduced into California with the passage of enabling legislation in 1923. Since that time, the district system has evolved into a large metropolitan fire service with jurisdiction encompassing 35 incorporated cities as well as the structurally developed unincorporated areas.

During this development as many as 59 different districts have been formed in Los Angeles County, although the number in operation at any one time has never exceeded 34. Through a gradual program of consolidation the number of districts was reduced to nine by 1950. This trend toward consolidation has continued to the present time.

Under a policy established by the Board of Supervisors, the procedure to consolidate two or more districts is initiated whenever the tax rates of the different districts approach the same level, and it can be demonstrated that their merger will reduce operational costs and achieve more efficient administration.

In 1970, reflecting this philosophy, the Lancaster, Palmdale, Altadena and East Los Angeles Districts were merged with the Consolidated District. This reduced the number of districts to three - Consolidated, Dominguez, and Universal City. The latter two districts each have only one fire station. Their tax rates are not close enough to that of Consolidated to justify merging with the larger district at this time.

Until 1954 the fire districts furnished protection only to unincorporated areas. In that year the community of Lakewood incorporated and chose to remain a part of the Consolidated Fire Protection District. Twenty-nine of the thirty-one cities which have been formed since that time have also elected to remain in the fire district system rather than provide their own fire protection.

It is only in recent years that cities which incorporated prior to 1954 have shown an interest in availing themselves of district fire service. In 1967, Glendora annexed to the Consolidated District, followed by Signal Hill in 1968, Maywood in 1970, and Huntington Park and Bell in 1971. This brought the number of cities in the District to its present total of 35.

Several other cities have considered annexing to the District and have had comparative studies prepared by the County to determine the effect this would have upon the cost and service level of their fire protection. These cities are Claremont, Compton, Culver City, El Monte, Cardena, La Verne, Monrovia, Montebello, and Whittier. Of these, El Monte and Monrovia rejected annexation as a result of referendums submitted to their residents. Among the others, no city appears to be seriously considering annexation at this time.

Current Organization and Operation

Since their inception the fire protection districts have been administratively integrated with the County Forester and Fire Warden in a single agency commonly referred to as the County Fire Department. Consequently, as we noted in Chapter II, the Forester and Fire Warden also serves as the Chief Engineer of the districts.

The Forester and Fire Warden organization provides fire protection to the watershed area along the foothills north and south of the Angeles Forest

and to all other unincorporated areas in the County which are not structurally developed. Funding for this service is provided from the County genera]. fund which is derived from a tax levy upon all property owners in the County. The district organization provides fire protection to 35 incorporated cities and to all unincorporated areas in the County which have been developed for commercial or residential use. Funding for the districts is derived from a special tax levy on property owners within each district.

The Subsidy Question

The provision of two types of service funded from two separate sources, but provided by a single organization, has necessitated the development of a complex system of allocating costs between the two entities. Perhaps because of this complexity or perhaps because of the recent controversy over the cost of the Sheriff's contract services, the belief has spread among independent city officials that the County is using general fund money to subsidize district operations.

The County, according to this charge, is interested in keeping the district tax levy low so that the district system will remain attractive not only to cities now in the district but to independent cities that may consider joining the district in the future. Some city officials believe that to keep the levy low the department charges a disproportionate share of both direct and indirect costs to the Forester and Fire Warden and so to the general fund. Consequently, they believe that the districts are not charged with their proper share of departmental costs. In this manner, they contend, the general fund is used to subsidize district operations.

Our interviews with city officials left no doubt that this belief is now widely held among independent city officials. Several officials, for

example, told us that it is their understanding that the salaries of all chief officers above the level of captain are charged to the general fund, even in cases where their time is devoted wholly or predominantly to district operations.

Another common charge is that the department often uses men and equipment from the Forester and Fire Warden for district emergencies without proper reimbursement to the general fund for this assistance.

Clearly these are serious charges. If they are true, the County's procedures most certainly need immediate correction and the officials responsible for the misapplication of public funds should be severely reprimanded, if not discharged. What then are the actual facts? Because of the seriousness of these charges, we made a thorough study of the entire subject. Following is a detailed report of our findings.

As the charges indicate, the subsidy question is really two separate questions:

1. The possible fiscal support of district operations by the general fund, and

2. The use of general fund employees to handle district responsibilities for fire suppression.

We shall discuss each question separately as follows:

Fiscal Support

As discussed in earlier section9 of this report, the Forester and Fire Warden Department is a County department and, as such, all of its net costs are a charge against the County general fund budget and are included in the County tax rate. The districts are each separate entities, and their net costs are charged to the areas receiving services in the form of a district tax levy.

The County Charter Section 24-½ (e) provides that the Forester and Fire Warden shall . . . "have charge of all matters relating to or connected

with the administration of such County Fire Protection Districts." Accordingly, the operations of the County Department of Forester and Fire Warden and the various fire protection districts have been set up as a single organizational unit known as the County Fire Department. Their budgets are separate and distinct documents.

The districts also have their own salary resolution which lists all fireman, fireman specialist, captain, dispatcher, and head dispatcher positions. The County salary ordinance includes all uniform positions from the rank of battalion chief to the County Forester and Fire Warden. In addition, all of the civilian positions which provide support and related services for both the Forester and Fire Warden Department and the districts are included in the County salary ordinance, and are initially funded in the Forester and Fire Warden budget.

The individual budgets of the various fire protection districts are charged for services provided by line and support fire fighting and civilian positions which appear in the Forester and Fire Warden budget. This is accomplished by a service charge from the general fund to the districts.

In allocating direct costs, such as those for training, fire inspection, and dispatching, a yardstick system is used based upon established workload factors - number of men trained, number of hours worked, number of calls received, and so on.

In allocating indirect costs, including the salaries of chief officers and all overhead personnel involved in administrative and special service activities, pro-rata percentages have been established which reflect the department's estimate of the time the employee devotes to each service.

In no case is the salary of any chief officer allocated wholly to the Forester or Fire Warden if he is involved in any manner with district operations.

Allocations to the districts range from 5O% for the Forester and Fire Warden and his chief deputy to 100% for division assistant chiefs and battalion chiefs who are assigned wholly to district operations. The salary of the division chief responsible for all direct fire suppression forces is allocated 74% to the districts. Similarly the chief officers assigned to fire prevention and training are allocated to the districts on a 65% and 70% basis respectively.

The salaries of all other overhead administrative and service personnel are allocated in the same manner, the determining factor being the department's estimate of the hours devoted to each service. Those assigned to one service only are always fully charged to that service.

The costs of services provided by other County departments are either pro-rated in the same manner between the general fund and the districts or are charged on an actual cost basis. For example, fire apparatus repairs performed by the County Mechanical Department are based upon the actual labor and material costs plus an overhead factor which is in excess of 80%.

Other costs of operating the district are handled as direct charges to the district's services and supplies or fixed assets budget accounts on a line item basis.

Certainly, in examining the list of allocations, it is possible to argue that this or that pro-ration ought to be changed by some number of percentage points. Pro-rations, particularly those based upon estimates of an employee's time, can be elusive, since it is difficult to develop objective and quantitative measures for calculating them precisely. Consequently, they are always subject to some argument.

In our examination of the department's allocations, however, and in our discussions with department officials on how they were determined, we could discover no instance in which a major change in the pro-ration percentage could

legitimately be recommended. Some minor changes, perhaps, that is all. Thus, according to our finding, even if some changes or refinement were to be made in the present allocations, these changes would have only a minimal effect on the current general fund and district tax levies. Considering the size of the total departmental budget - now at $42.1 million annually - only a percentage misallocation of major proportions could significantly affect the two tax levies.

Our examination, therefore, reveals no evidence that the general fund is being charged an inordinate share of departmental costs or is being used in any way to subsidize district operations.

It is important to note also that our investigation is not the only one that has been made of these accounting procedures. Since 1964 the departmental accounts have been audited five different times, three times by the County Auditor-Controller and once each by a private firm. On all occasions the conclusion was the same - the accounts are in order and the cost allocations follow established accounting principles.

The County Auditor-Controller conducted his audits in three successive years beginning in 1964. The private firms, Arthur Young & Co. and Price Waterhouse & Co., both conducted separate audits in 1968, Arthur Young as contract auditor for the Grand Jury and Price Waterhouse as an outside consultant hired by the City of Commerce.

The Grand Jury directed Arthur Young to review the work of the Auditor-Controller and specifically to investigate the procedures for allocating costs between the Forester and Fire Warden and the districts. The report states:

> "A review was made of the costing methods and procedures used to allocate costs between the Districts and the Department of Forester and Fire Warden. This included a review of the methods used to allocate costs among the Districts.

"The Consolidated District pays the salarie8 for all firemen, specialists and captains. A portion of the costs are then charged to the other Districts and to the Forester and Fire Warden. All other personnel are paid by the Department of Forester and Fire Warden and allocated among the Department activities and the various Fire Protection Districts.

"The methods and procedures used to allocate costs (both direct and indirect) appear to be fair and reasonable." (Report on Examination of the Fire Protection Districts for the Los Angeles County 1968 Grand Jury, September 30, 1968.)

The Price Waterhouse study was conducted under contract with the City of Commerce. Commerce supplies its own fire facilities and equipment but contracts with the County for all fire service operations. Since its ten-year contract for this service was due for renewal in 1968, the city asked Price Waterhouse to conduct a study of the effectiveness and cost of the County service. The Price Waterhouse study concluded that the City of Commerce would incur a significant increase in annual cost if it decided to establish its own fire department. The report, therefore, recommended that the city renew its contract with the district. Commenting on the allocation of costs within the County department, the report concludes:

"Administration costs allocated to Commerce include wages, overhead, and supplies for the various departments of the County Fire Department headquarters. The departments and positions covered and the services rendered are shown in Exhibit II. The County's method of allocation is based on estimates of the time each department spends on matters concerning fire protection districts and contract cities as compared to the time

spent on watershed areas and other matters . . This is a fair method of distributing most administrative costs."

In our discussions with city officials, several reported that in their opinion a major reason for the mistaken views about County Fire Department accounting procedures is a secretive attitude in the department itself. In the past, these officials said, the department has been reluctant to open its books to city inspection. Thus, they say, a natural suspicion has grown up that the department has something to hide.

How accurately these statements reflect past policy in the department is debatable. What is certain, however, is that they do not reflect present policy. According to the Forester and Fire Warden, Chief Richard Houts, all city officials who are interested are invited to visit County Fire Department headquarters and examine its books. The Cities of San Gabriel and West Covina have both sent administrative personnel to the department to review its budget procedures. In addition, presentations regarding budgetary procedures were made to the Independent Cities Association on two occasions. "We will provide information regarding our services and financing to all interested city officials," Houts told our committee representatives, "and we have no secrets regarding our operations." Certainly, for any city official who is suspicious of the County's accounting methods this is an invitation which should be accepted.

Use of General Fund Employees for District Responsibility

The second major charge voiced by a number of city officials is that manpower and equipment from the Forester and Fire Warden are used to respond to district fires without proper reimbursement. This practice, they say, results in a general fund subsidy of district operations at the expense of non-district cities.

There are currently 125 County Fire Department stations. Of these, 90 stations are in the district system - 83 in the Consolidated District, 1 each in the Dominguez and Universal Districts, and 5 in the City of Commerce. The remaining 35 are Forester and Fire Warden general fund stations.

Five of the Forester and Fire Warden stations house a total of 7 pieces of district equipment (1 truck, 4 engines and 2 squads). The cost of the manpower assigned to such district-owned equipment is fully paid for by the district. On the other hand, the district stations house 15 pieces of Forester and Fire Warden equipment, most of which is manned by district personnel in the event of a major watershed fire.

Since 1967 the Board of Supervisors has maintained a strict policy that requires the annexation to the district of all structurally developing areas. Annexation to the district is initiated when development plans or maps are sent by the County Engineer or the Regional Planning Commission to the Forester and Fire Warden for checking and approval. Since this occurs before actual development this ensures that all new industrial, commercial and residential areas are annexed to the district as soon as legally possible.

Therefore, as watershed areas are structurally developed they are annexed to the district. When sufficient revenue is generated from the district tax levy a district station is located in the area. In the meantime, the district gradually provides manpower and equipment based on district fire protection needs in the area. This is accomplished by placing such manpower and equipment in general fund stations. Where there is a shared responsibility, the district shares in the cost of personnel assigned to the general fund station.

It is also true that a high degree of reciprocity exists between the two entities where they both operate individual stations in borderline areas. Fixed response patterns ensure that adjacent district or Forester and Fire Warden

engine companies are dispatched without delay to assist whichever organization has the primary responsibility for an emergency. It should be noted that the assistance by the Forester and Fire Warden to the district is generally limited to the areas adjacent to the watershed.

On major watershed fires, the Forester and Fire Warden relies on available forces from the district as well as all city departments in Los Angeles County and neighboring counties. However, because of the integrated nature of the County operations, greater reliance is placed on district assistance. In such cases, the district is reimbursed from the County general fund for the cost of overtime salaries or other out-of-pocket expenses arising directly out of the particular emergency.

This reciprocal arrangement is mutually beneficial to both organizations because it enables them to avoid duplication in the assignment of men and equipment. Each shares in the benefits of a co-non training program, a single communication system, compatible equipment and procedures, and centralized administration and planning.

The fire department believes that the general fund portion of its operation benefits from the fact that it can rely on the full resources of the much larger, well-equipped district to provide a reserve capability in the event of major watershed conflagrations and other disasters or emergencies of a Countywide significance.

It should be pointed out that the various cities which maintain their own departments provide assistance to the County in the event of a major fire and that the County responds upon `request to all watershed fires in cities. Considering the County-wide impact of major fires such as the 1970 conflagration and the Bel Air fire in 1961, the committee believes that the concept of reciprocity between the general fund and district operations enhances the total fire fighting capacity of the co-mmunity without any apparent cost inequity.

APPENDIX E

Procedures For Annexation to The Consolidated Fire Protection District

Fire Service Study and Formal Agreement

As we have emphasized, the decision of a city to annex to the Consolidated District should be made only after a thorough study of the effects of such a change both as to cost and level of service. The County Fire Department will, upon request of a city council, prepare a report describing the fire protection services which a city will receive from the district including an estimate of the cost of these services.

Once a city council determines that it is in the best interests of their city to annex to the Consolidated District, it takes about four months to comply with the annexation requirements of the State Government and Health and Safety Codes. Concurrent with the initiation of the formal annexation procedure3 the city and district officials begin discussions leading to the consummation of a formal agreement concerning the disposition of the facilities and assets of the city fire department, the transfer of city personnel, and other practical considerations necessary for an orderly transition of services.

Transfer of Facilities and Equipment

It is the policy of the district that city stations, apparatus, and equipment which are required for the fire defenses of that city be transferred without payment to the district. Since a city brings a new set of fire protection problems to the district, it should also make some contribution toward the handling of those problems. A city desiring to annex to the district must therefore expect to contribute two things - some tangible assets to get started with and an annual tax levy for the continuing services it will receive.

City fire station facilities are transferred to the district on a reversionary basis. If the district subsequently ceases to use a city station, it will be returned to city ownership. Apparatus and other equipment are appraised at fair market value. The appraised value is set down in the annexation agreement as a refundable sum in cash or kind, which will be returned to the city if it withdraws from the district.

Transfer of Personnel

One of the more important aspects of the city-district agreement is the transfer of personnel. The State Health and Safety Code and the County Charter provide for the blanketing in of city firemen into the district without a job qualifying examination. Fire personnel transferred to the district receive all prevailing benefits of district employees, such as vacations, holidays, sick leave, and retirement based upon their length of service in the city fire department.

The present policy of the district insures that no city fireman will suffer a reduction in pay and that he will be placed on a job in the district fire department for which his training and experience best qualify him. This does not necessarily mean that a city employee will be brought into the district at the same rank that he has held in the city department. The principal consideration in the blanketing in of city personnel is an appraisal of actual job duties and level of responsibility of each employee and their comparability with those of district position classifications. For example, a city station fire captain may have daily supervisory responsibility for an engine company comparable to his counterpart in the district. The similarity between the two positions, however, may end at that point because of the greater complexity of duties of the district position. Unlike the city captain, the district captain

may be responsible for inspections of commercial occupancies by engine company personnel. As another example, it is the policy of the district that the captain of the "first-in" engine company assume command of all responding companies pending the arrival of a superior officer. This multiple company command responsibility is seldom required of captains in the smaller cities, because only one or two companies are normally available for response. This same critical comparative job analysis is applied to the position held by every city fire department employee being transferred to the district.

Even though the city employee may be reduced in rank, it is usually possible to place him on the same or a slightly higher salary level because of the higher salary ranges for positions with the same titles in the County. It should be noted that although the positions may have similar titles, their duties, as we have explained above, may not be comparable.

The only city employees who cannot be transferred to the district are those 60 years of age or above, those with less than six months' service with the city fire department, or those who fail to meet the physical or health standards required of all district fire personnel.

If all of the personnel transferred to the district are not needed in order to maintain an adequate level of fire protection in a city, the excess personnel will be assigned to vacancies existing elsewhere in the district. Because of the size of the Consolidated District there are normally sufficient vacancies created by normal attrition to accommodate all personnel blanketed in through city annexations without exceeding current allocations of district budgeted positions.

Chronology

Following is a summary in chronological order of the principal legal and procedural steps involved in the annexation process:

City - Enters into negotiation with the District for an agreement covering District services, disposition of city facilities and equipment, and transfer of city fire personnel.

- Adopts resolution of intent to annex to the District.

- Files resolution of intent with the Local Agency Formation Commission, resolution accompanied by `laps and legal description of proposed annexation prepared by the County Engineer.

Local Agency Formation Commission - Holds public hearing to determine if the proposed annexation is in the best interests of the District, the city, and the surrounding area.

City - Following approval of the Local Agency Formation Commission, adopts resolution requesting the Board. of Directors of the District (Board of Supervisors) to approve the annexation.

- Signs annexation agreement negotiated with the District.

Board of Supervisors - Approves City resolution requesting annexation.

- Signs annexation agreement.

City - Adopts ordinance declaring annexation to the District.

- After second reading, files ordinance with the Executive Officer of the Board of Supervisors.

Executive Officer, Board of Supervisors - Notifies State Board of Equalization of the completion of annexation procedures.

- Notifies the County Engineer, who in turn notifies the County Assessor and the Chief Engineer of the District.

City - Adopts resolution naming Chief Engineer of the District the City Fire Chief.

Chief Engineer, Fire Protection Districts - Notifies the regional agency of the Insurance Services Office of the annexation.

EXHIBIT 1

STATIONS, PERSONNEL AND INSURANCE GRADES
43 FIRE DEPARTMENTS - LOS ANGELES COUNTY
1971-72

	Number of Stations	Total Uniformed Personnel	Chief Officers	Fire Insurance Grading Fire Dept.	Fire Insurance Grading City
Aihambra	4	80	5	2	3
Arcadia	3	54	3	3	3
Avalon	1	4*	1	9	7
Azusa	1	35	4	4	4
Beverly Hills	3	94	5	3	3
Burbank	6	125	7	3	3
Claremont	2	18**	1	6	5
Compton	3	78	5	3	3
Covina	3	38	2	4	4
Culver City	3	61	4	3	3
Downey	5	86	6	2	3
El Monte	3	60	4	3	4
El Segundo	2	58	5	3	3
Gardena	2	46	2	5	5
Glendale	9	170	6	3	3
Hawthorne	3	48	4	2	3
Hermosa Beach	1	16	1	7	6
Inglewood	4	93	4	2	2
La Verne	1	6***	1	7	7
Long Beach	22	429	18	3	3
Lynwood	2	44	2	4	4
Manhattan Beach	2	39	3	5	5
Monrovia	1	27	2	4	4
Montebello	3	49	4	3	4
Monterey Park	3	47	4	5	5
Palos Verdes Estates	1	17	2	7	7
Pasadena	9	168	10	2	3
Pomona	6	126	6	2	2
Redondo Beach	2	64	4	4	4
San Fernando	2	24	1	5	5
San Gabriel	2	33	4	4	4
San Marino	1	25	3	3	4
Santa Fe Springs	3	55	5	3	5
Santa Monica	5	98	6	3	3
Sierra Madre	2	1****	2	7	6
South Gate	3	58	5	3	4
South Pasadena	1	24	3	4	4
Torrance	5	146	7	3	4
Vernon	4	130	7	2	3
West Covina	4	62	4	4	4
Whittier	3	87	6	3	3
Total-41 Cities	145	2923	178	-	-
Los Angeles City	108	3155	82	1	2
Los Angeles County	125	2118	69	2	Various
Total-All Departments	378	8196	329		

* 18 Volunteers
** 15 Cross-trained Police Positions
*** 30 Volunteers
**** 35 Volunteers

Source: Information furnished by each city

AREA AND POPULATION OF CITIES
WHICH OPERATE THEIR OWN FIRE DEPARTMENTS

City	Area (Sq. Miles)	Population
Alhambra	7.619	62,125
Arcadia	11.252	42,868
Avalon	1.210	1,520
Azusa	7.456	25,217
Beverly Hills	5.696	33,416
Burbank	17.128	88,871
Claremont	7.274	23,464
Compton	9.567	78,611
Covina	5.827	30,380
Culver City	4.875	34,526
Downey	12.755	88,445
El Monte	9.353	69,837
El Segundo	5.516	15,620
Gardena	5.244	41,021
Glendale	29.282	132,752
Hawthorne	5.559	53,304
Hermosa Beach	1.360	17,412
Inglewood	9.103	89,985
La Verne	6.263	12,965
Long Beach	48.675	358,633
Lynwood	4.842	43,353
Manhattan Beach	3.810	35,352
Monrovia	13.685	30,015
Montebello	8.015	42,807
Monterey Park	7.327	49,166
Palos Verdes Estates	4.767	13,641
Pasadena	22.939	113,327
Pomona	22.888	87,384
Redondo Beach	6.200	56,075
San Fernando	2.367	16,571
San Gabriel	3.981	29,176
San Marino	3.750	14,177
Santa Fe Springs	8.760	14,750
Santa Monica	8.103	88,289
Sierra Madre	2.935	12,140
South Gate	7.324	56,909
South Pasadena	3.470	22,979
Torrance	19,938	134,584
Vernon	5,015	261
West Covina	14.720	68,034
Whittier	12.054	72,863
Total 41 Cities	397.904	2,302,825
Los Angeles City	463.689	2,814,152
Total 42 Cities	861.593	5,116,977

Source: County Regional Planning Commission
County Engineer

AREA AND POPULATION OF CITIES SERVICED BY
THE CONSOLIDATED FIRE PROTECTION DISTRICT

City	Area (Sq. Mile5)	Population
Artesia	1.614	14,757
Baldwin Park	6.705	47,285
Bell	2.813	21,836
Bell Gardens	2.394	29,308
Bellflower	6.175	51,454
Bradbury	1.996	1,098
Carson	18.685	71,150
Cerritos	8.784	15,856
Comerce	6.558	10,536
Cudahy	1.064	16,998
Duarte	6.594	14,981
Clendora	11.000	31,349
Hawaiian Gardens	0.950	8,811
Hidden Hills	1.377	1,529
Huntington Park	2.971	33,744
Industry	10.763	714
Irwindale	9.493	784
Lakewood	9.503	82,973
La Mirada	5.831	30,808
La Puente	3.446	31,092
Lawndale	1.931	24,825
Lamita	1.800	19,784
Maywood	1.138	16,996
Norwalk	9.181	91,827
Palmdale	42.003	8,511
Paramount	4.560	34,734
Pico Rivera	8.229	54,170
Rolling Hills	2.953	2,050
Rolling Hills Estates	3.328	6,027
Rosemad	4.915	40,972
San Dimas	15.023	15,692
Signal Hill	2.140	5,582
South El Monte	2.567	13,443
Temple City	3.786	29,673
Walnut	8.740	5,992
Total - 35 Cities	231.010	887,341

Source: County Regional Planning Commission
County Engineer

Map of Los Angeles County

May be obtained from the office of

Economy and Efficiency Commission

Map of Los Angeles County

May be obtained from the office of

Economy and Efficiency Commission