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**A PLAN FOR THE CONSOLIDATION
OF AIRBORNE LAW ENFORCEMENT
OPERATIONS FOR CALIFORNIA CITIES**

by

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SACRAMENTO, CALIFORNIA
1989**

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PART ONE - A FUTURES STUDY

The future of airborne law enforcement in California: What will be the state of consolidation by the year 2000?

PART TWO - STRATEGIC MANAGEMENT

A model plan for California cities in general and the county of Orange in particular.

PART THREE - TRANSITION MANAGEMENT

A description of a management structure for a planned transition from five individual airborne units of five jurisdictions to one consolidated operation.

ACKNOWLEDGMENTS

I wish to thank the personnel of the Anaheim, Costa Mesa, Huntington Beach, and Newport Beach Police Departments, and the Orange County and San Bernardino County Sheriffs' Departments for their assistance with this project. In particular I want to thank Captain Mike Blich, Captain Dave Brooks, Captain Vito Ferlauto, Captain Stan Kantor, Lieutenant Bob Morrison, and Fire Chief Ray Picard without whose assistance the completion of the research would have been impossible.

I also want to thank Sergeant Richard Nigosanti of the Old Saybrook, Connecticut Police Department.

Supplementary Executive Summary

CHAPTER ONE: A FUTURES STUDY

Background: Orange County is an area of 786 square miles with 28 incorporated cities and a population in excess of 2,000,000. Four of the 28 cities, as well as the sheriff's department, have police helicopters. These five jurisdictions combined encompass law enforcement services over approximately one-half the area of the county with one-half of its population.

This area was selected as a study area, as a model with which to study the potential for combining police air support units into a single consolidated air unit covering all or part of the county. Because of the size of the county and geographical locations of the four model cities, the area seemed uniquely suitable to a study of this type.

Study of Consolidation Acceptance: The issue of acceptance of consolidation by county and city officials was studied by a panel of ten people by a Nominal Group Technique (NGT) who gathered in Huntington Beach. The panel members were selected because of their familiarity with airborne law enforcement and their knowledge of the Orange County area. Their study focused on trends and events affecting the region and the state. There was also a discussion of politics and air operations in the area.

The panel selected six potential future events and seven existing trends as having possible significant impact upon, and relationship to, the issue of combining airborne law enforcement operations. The selected potential future events were a joint powers aircraft maintenance agreement, a major flood or earthquake, an oil shortage, a reduction in police budgets, and inflation exceeding 20 percent. The existing trends chosen were law enforcement acceptance of consolidation, available financing, need for aircraft, the crime rate, government consolidation, and traffic congestion.

The future study also includes an examination of issue-related literature, several interviews, and concludes with three alternate scenarios.

CHAPTER TWO: STRATEGIC MANAGEMENT

Strategic Plan: The ten members of the NGT panel were utilized as a Modified Delphi Policy Group to formulate alternative strategic policies for implementing and operating a consolidated airborne system. Through a pro

and con discussion and a voting process, two complementary strategies were selected for further planning. The combined strategy involves the formation of a committee to do a feasibility and present a plan to the police chiefs, sheriff, and city managers. A joint powers agreement would then be established to consolidate the air units of the interested departments and make the service available to other cities by contract.

The Environment: The environment was examined for threats and opportunities that could impede or enhance a consolidation effort. Noise, non-availability of landing sites, air traffic, crime, and politics were seen as potential threats. Finances, increasing acceptability of consolidation, and timing were seen as opportunities.

An analysis of the weaknesses and strengths of the five study agencies revealed that all are capable of successfully undertaking a merger.

CHAPTER THREE: TRANSITION MANAGEMENT

Commitment and Management: The transition plan includes the determination of "critical mass" stakeholders, their positions on the issue, and methods and strategies for gaining the commitment of those opposed to it. A transition management structure was selected to monitor the change, make policy, and furnish necessary resources. The structure chosen was a "hierarchy" consisting of the sheriff and four police chiefs or their designees.

Included in the transition plan is a theoretical organizational structure and system based upon information presented by the policy formation panel.

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INTRODUCTION

More and more law enforcement agencies, both nationwide and statewide, are opting for the purchase of aircraft to assist them in their enforcement efforts. Even though this technology is quite costly, the advantages and benefits of aircraft to law enforcement seem to make it a worthwhile investment to those governmental entities. Traditionally, when agencies choose to use aircraft, they do so on an individual single agency basis. Consolidation and regionalization of this or other governmental services, while not a new idea, seemingly has not been widely or enthusiastically accepted at any level.

In 1970, the Orange County Grand Jury recommended that city and county officials explore ways to coordinate helicopter patrols over the entire county. In 1972, a proposal was initiated by the Orange County Board of Supervisors to test a county-wide or regional helicopter program for the county (County-wide or Regional Helicopter Program for Orange County Study, 1972). The proposal was to use the combined helicopter resources of the four cities in the county with helicopters as well as an airplane that would be provided by the county. After initial study involving the various cities' officials and the board of supervisors, the proposal was withdrawn. Proposals from other areas have included suggestions for sharing designated services

or functional components rather than a total consolidation of agencies.

While there have been small steps and maybe even a slight trend toward some efforts at consolidation, the change in that direction has not been significant. There are many reasons for this with probably the most important being the desire for "home rule" or local control.

Other reasons include no real incentive or need, difficulty of implementation and administration, and an honest belief by some that nonconsolidated services can best serve the people paying for them. Probably the most important and possibly the only legitimate reasons to join governmental services are cost savings and a better level of service. Those reasons undoubtedly motivated the little consolidation that has occurred thus far.

Most of the fire departments in Orange County have formed into "nets." These are partially consolidated operations for purposes of joint communications, training, central reporting, and automatic aid. Two cities in Los Angeles County had a joint police helicopter operation for several years. While no actual merging of air operations has occurred in Orange County, the issue continues to be discussed. The existing agencies are financially able to maintain their operations, but most then would prefer to increase their air coverage and add additional or larger aircraft. Merging or coordination of operations has been

discussed as one way to accomplish this.

Recent discussions have taken place regarding the possible merging of maintenance operations for some of the county's police helicopters and the purchasing of aviation fuel jointly. While these discussions have not as yet led to implementation of any sort, they could be significant in the long run. The general feeling indeed seems to be that any appreciable degree of consolidation is highly unlikely, but it is generally agreed that some changes in the environment could promote a closer look at consolidation. Primary reasons would be a significant change in the economic or political situation and, with less impact, a major natural disaster or a substantial increase in traffic congestion, both of which could create a critical need for increased response from well-coordinated airborne support units.

All of this provided motivation for this study of airborne law enforcement consolidation. It is hoped the study will be timely and aid administrators in deciding whether these types of operations might be feasible within the next decade.

The County of Orange was chosen as the geographical area in which to focus this study because of its size, existing law enforcement aircraft operations, and the author's familiarity with the area.

CHAPTER ONE: A FUTURE STUDY

The future of airborne law enforcement in California:
What will be the state of consolidation by the
year 2000?

Research Methods

Formulation of Issues

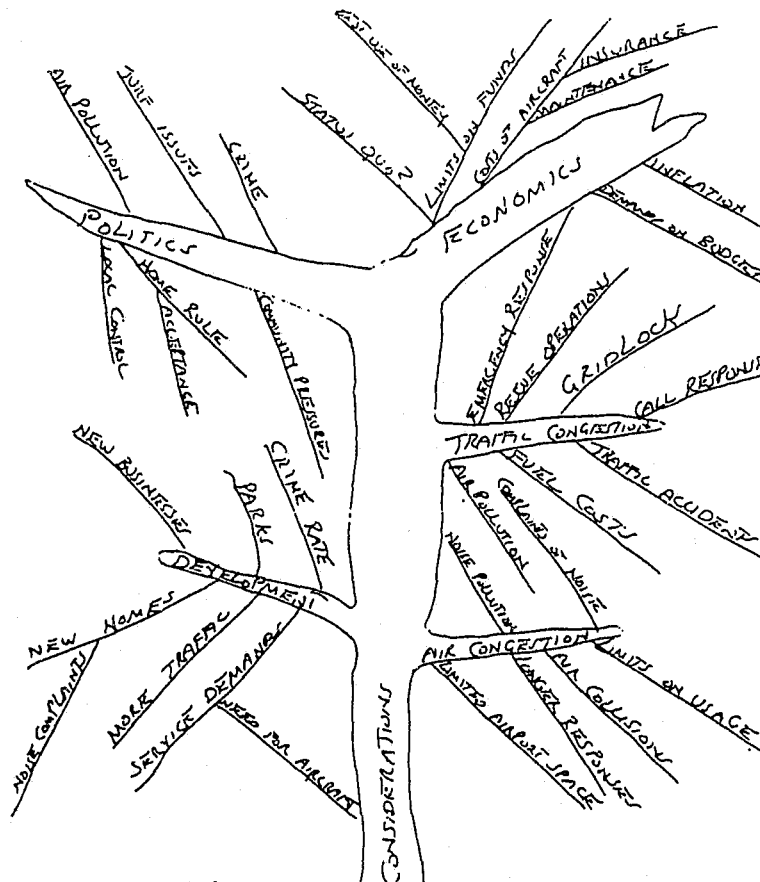
The issues. The issues, as used in this study, are those topics, items, or areas that are related to the use of aircraft in law enforcement. An attempt was made to select the issues most meaningful to the subject of consolidation and focus on them for additional study.

Defining and focusing on specific issues or topics was necessary to keep the study properly directed and limited in scale.

Use of the issues. The issues will be used for many purposes. Among them are the preparation of questionnaires, the development of trends and events that might affect the future, a review of present and past operations and factors, and a look at areas where pitfalls may occur or have been experienced. At best, the issues will also produce a clearer look at what is occurring societally, technologically, environmentally, and politically

that may impact the issue of consolidation of airborne law enforcement operations. The issues will also be used in the development of scenarios which follow later in this chapter.

Formulating the issues. The issues were developed by five methods: building a decision tree, scanning the environment, reviewing literature, conversing with knowledgeable persons, and personally knowing and reflecting on the issues. The decision tree, as depicted in the following illustration, was a simple method of developing some primary issues that should be considered, as well as other factors and points that were related to the primary ones.



L.E. AIRBORNE CONSOLIDATION

Scanning and literature review. The scanning process was a system of monitoring the environment for relevant and recent events. Scanning included talking with classmates and instructors, listening to current events on television, and reviewing numerous books and periodicals. In addition to a brief review of books and articles, a search and review was done of publications that contained information specifically pertaining to consolidation, regionalization of government services and aircraft use by law enforcement and government.

Among the sources and materials searched for this literature were the Federal Bureau of Investigation Academy library, the Rand Corporation reference manual, the National Criminal Justice Reference Service (NCJRS), and numerous newspapers and professional publications.

Conversations with knowledgeable persons. These conversations were primarily with those in law enforcement who had experience in airborne/aircraft operations and with other persons involved in sales, manufacturing, and training. There were far more people than expected who had information on the use of aircraft by law enforcement agencies. Sometimes this information was more in the nature of tentative opinion, but it nevertheless seemed of particular importance as it pertained to uses, noise, and landing/takeoff of aircraft.

Personal knowledge. The author has been assigned the command level responsibility of a municipal police helicopter unit for approximately the last two years, and that experience has brought about regular contact with various representatives and associates of similar operations. The author also has worked as a field officer with aircraft support and has lived in a city with law enforcement aircraft for many years.

Issues formulated. Past issues that seemed to be significant were:

1. Effectiveness of aircraft in law enforcement
2. Acceptability of aircraft by communities
3. Cost-effectiveness of using aircraft
4. Housing and maintenance of aircraft

Some present issues are:

1. Are individual airborne operations a better alternative than consolidated operations?
2. Can airborne operations be partially or totally combined or consolidated?
3. Will financing airborne operations be a growing problem?
4. Is public acceptance growing or declining?
5. What options or alternatives are available that might increase usage but lower or distribute costs?

Some issues that should be significant in the future are:

1. Will air congestion affect future airborne operations?
2. What will be impact of highway congestion on need for aircraft?

3. What will be impact of political climate and financial limitations on future consolidation efforts?
4. Will consolidation be acceptable to police chiefs, the sheriff, and city/county administrator?
5. How would a consolidated operation function and be managed?
6. How would such a plan be implemented?
7. Where could such an operation be based in a developing urban area?

The issues listed are not intended to include all possible factors, only those most pertinent to consolidation. From those primary issues, five more general issues were selected for further study. Those issues were air congestion, traffic congestion, economics, politics, and new construction or development. The study will emphasize economics and political considerations. The next step in the study was to formulate a list of candidate trends and events related to the issue of aircraft unit consolidation.

Formulation of Trends and Events

Need for trends and events. The formulation of related ongoing trends and potential future events assists in assessing the possible future. After study and analysis by informed persons, the direction of a trend as well as the likelihood of an event occurring often can be forecasted with some reasonable certainty. A hypothetical case can then be established. From this we can determine

possible future occurrences, given no other unexpected events. Some determination can also be made of how the trends and events might impact each other and the issues being studied. The trends and events are then used to make decisions and to develop alternate future scenarios.

How the trends and events were developed. The trends and events are formulated primarily through the use of scanning as explained on preceding pages. Scanning produced several potential trends and events. These were then analyzed in accord with the following criteria:

- significance and relationship to the topic studied and the issues
- trends show a consistent tendency or pattern over a period of time
- events could be verifiable in retrospect and a single entity or occurrence

Using this process of analysis, a number of trends and events were then deemed worthy candidates for further study by a panel or study group. The trends were purposely made nondirectional, their direction to be decided at a later time.

Candidate trends and events developed. The following candidate events were chosen for further study:

- E1. "Work at Home" employees reach 25 percent in Orange County
- E2. Household alarms become able to signal law enforcement aircraft
- E3. Economic considerations require 25 percent reduction in police budgets in Orange County

- E4. Use of law enforcement helicopters mandated for rescue due to traffic congestion
- E5. Nationwide oil/fuel shortage
- E6. Legislated state financial aid to law enforcement
- E7. Annual inflation exceeds 20 percent
- E8. Availability of a quiet helicopter for law enforcement
- E9. Mandatory 1,000 foot minimum altitude for aircraft in southern California
- E10. Major catastrophe involving civilian population due to crash of a police aircraft in Orange County
- E11. New law mandating a court order/search warrant for discovery of activity on private property
- E12. Rapid transit rail system developed in Orange County
- E13. Countywide slow-growth plan mandated
- E14. Major flood or earthquake in Orange County area
- E15. Orange County Airport forced to close due to encroaching development and noise
- E16. El Toro Marine Air Facility closes
- E17. Agreement reached for joint powers maintenance of law enforcement aircraft in Orange County

The following trends were selected as candidate trends:

- T1. Use of aircraft for executive transportation
- T2. Availability of financing for airborne operations
- T3. General economic situation (better/worse)
- T4. Air congestion in the Orange County area
- T5. New residential development
- T6. New commercial development
- T7. Highway congestion in Orange County area

- T8. Uses of law enforcement aircraft for other than law enforcement purposes
- T9. Acceptance of law enforcement aircraft by Orange County citizens
- T10. Acceptance of law enforcement aircraft by local governments
- T11. Demand for local control of government operations
- T12. Development of newer aircraft for law enforcement use
- T13. Consolidation of government operations
- T14. Local law enforcement acceptance of consolidation/regionalization
- T15. Crime rate in Orange County
- T16. Air pollution in Orange County
- T17. Live video broadcasts from law enforcement aircraft
- T18. Cost of insurance for law enforcement aircraft
- T19. Need for law enforcement aircraft

The candidate trends and events were then mailed in advance to a panel of ten persons selected to study and analyze them using the Nominal Group Technique (NGT). This panel was also asked to produce additional trends and events the members believed were related and helpful.

Nominal Group Technique (NGT)

Choosing the NGT panel. In choosing the panel for the Nominal Group Technique, the intent was to obtain at least nine persons, both inside and outside law enforcement, who

were knowledgeable about the Orange County region and the use of aircraft in law enforcement. Ideal choices for that purpose were police chiefs and city managers or their designees and the sheriff and county administrator or their designees of the five agencies within the county using law enforcement aircraft. These people were selected as well as two persons from outside the immediate area.

The final panel, as seated on January 10, 1989, consisted of one police chief, three police captains, one sheriff's captain, and one police lieutenant, representing the five Orange County jurisdictions with aircraft. Additional panel members included a representative of the County of Orange Administrative Office, a deputy chief from the San Bernardino Sheriff's Department, an executive of a helicopter training and maintenance firm, and a representative from a large helicopter manufacturing firm.

How the NGT process works. The Nominal Group Technique is a process that includes using persons knowledgeable or familiar with the issues as a panel. The panel or group studies the issues and generates ideas that are recorded for all to see in round-robin fashion.

The process started with discussion and clarification of the previously listed candidate trends and events. The panel also generated several additional trends and events. Each NGT panel member then voted to select the five trends and five events he considered most crucial to the issue of

airborne law enforcement consolidation. The panel weighted the votes by assigning a 5 to the most important and then ranking them in descending order of importance by scores of 4, 3, 2, 1. Voting scores were then posted for everyone to see. There was then a second discussion followed by another vote involving only those events and trends that had achieved a significant score during the first vote. Those receiving a score of less than half the highest score were not reconsidered. This process resulted in the following events selected as most important in descending order of score received:

- E17. Agreement reached for joint powers maintenance of law enforcement aircraft in Orange County
- E14. Major flood or earthquake in Orange County area
- E3. Economic considerations require 25 percent reduction in police budgets
- E6. Legislated state financial aid to law enforcement
- E5. Nationwide oil/fuel shortage
- E7. Annual inflation exceeds 20 percent
- E10. Major catastrophe involving civilian population due to a crash of a police aircraft in Orange County
- E18. Consolidation of law enforcement/fire aircraft operations

The trends receiving the highest score were:

- T14. Local law enforcement acceptance of consolidation/regionalization
- T2. Availability of financing for airborne operations
- T19. Need for law enforcement aircraft

T15. Crime rate in Orange County

T3. General economic situation

T13. Consolidation of government operations

T7. Highway congestion in Orange County area

Interviews

Purpose of the interviews. The introduction to this chapter poses the question of "what will be the state of consolidation by the year 2000?" To find out where we are going and how likely we are to get there, it is first necessary to determine some things about where we have been and where we are now. Some of the issues mentioned previously were economics, use of aircraft, public acceptance, maintenance, housing, effectiveness, and usefulness. These issues all have some effect on the future use of aircraft as well as the future of consolidation. To put it in perspective, it can be assumed that if all five policing agencies studied in this report had adequate financing to provide round-the-clock air coverage with ideal aircraft and a solid maintenance program, with all prospects that this situation would continue for the foreseeable future, none of them would be interested in considering consolidation to any degree. However, that is not the case. All of the agencies could use additional finances to expand coverage and to purchase additional or larger

aircraft. Most of the agencies would prefer a more reliable maintenance system. Through interviews and the NGT process, it was learned that while consolidation is not being seriously considered at this time, it is being discussed, usually in the form of some partial consolidation or some type of regionalization. Consolidated and regionalized programs are now working in this and other areas and have been working successfully for many years.

To learn more about these issues and to address past, present, and future issues, interviews were conducted with several persons.

Who was interviewed. The persons interviewed were the police commanders and some of their support personnel who are responsible for the command of the airborne units in the five study agencies in Orange County and a deputy chief of a nearby sheriff's department whose department has a regionalized airborne unit. Other persons interviewed were the supervisor of a regional helicopter unit in the state of Connecticut and a local fire chief whose department participates in a partially consolidated fire net operation. The interview results, which will follow in the next section, will be a summary of the conversations with the people interviewed.

Research Results

Results of the Nominal Group Technique

What the panel produced. As mentioned previously, the NGT panel generated several trends and events in addition to those originally presented as candidates. The additional events were:

- E18. Agreement to consolidate law enforcement and fire aircraft operations in Orange County.
- E19. Law enforcement contracting with a private firm for all rescue work.
- E20. Cessation of existing law enforcement airborne operations in Orange County.

The added trends were:

- T20. Technology of alarm notification directly to aircraft.
- T21. Use of law enforcement aircraft for rescue work.

In addition to selecting the most pertinent or crucial trends and events, the panel was able to evaluate these trends and events to make a forecast of the speed and direction of the trends and the probabilities and impacts of the events. The panel then completed a cross-impact analysis of these trends and events indicating if and how each might be affected by the other. Lastly the panel produced some valuable discussion that provided additional insight into many of the issues and their future effects on consolidation.

Trend evaluation results. As previously explained, the NGT panel selected seven trends as being crucial to

consolidation and then evaluated those trends. Panel members were instructed to use their own judgment in deciding the level of the trend five years ago, five years from today, and ten years from today. "Today" was given a value of 100, and the value given would reflect the direction and strength of the trends.

The Trend Evaluation depicted below is the same as the form used by the panel members. It displays the seven selected trends. The numbers displayed are the median averages of the panel's scores. The future categories of "5 years" and "10 years" show two scores: what the trend will be and what it ideally should be.

TREND EVALUATION

WILL BE/SHOULD BE

Subgroup: _____

TREND STATEMENT		LEVEL OF THE TREND (Ratio: Today = 100)			
		5 Years Ago	Today	5 Years From Now	10 Years From Now
Local law enforcement acceptance of consolidation/regionalization	T14	50	100	100 127	137 145
Availability of financing for airborne operations	T2	105	100	95 100	92 100
Need for law enforcement aircraft	T19	80	100	137 117	150 137
Crime rate in Orange County	T15	80	100	120 80	140 90
General economic situation (better/worse)	T3	105	100	95 115	100 122
Consolidation as an alternative in government	T13	62	100	100 125	110 150
Highway congestion in Orange County	T7	77	100	145 80	180 77

The form reflects the selected trends and their direction and strength with the median averages of NGT panel scores displayed.

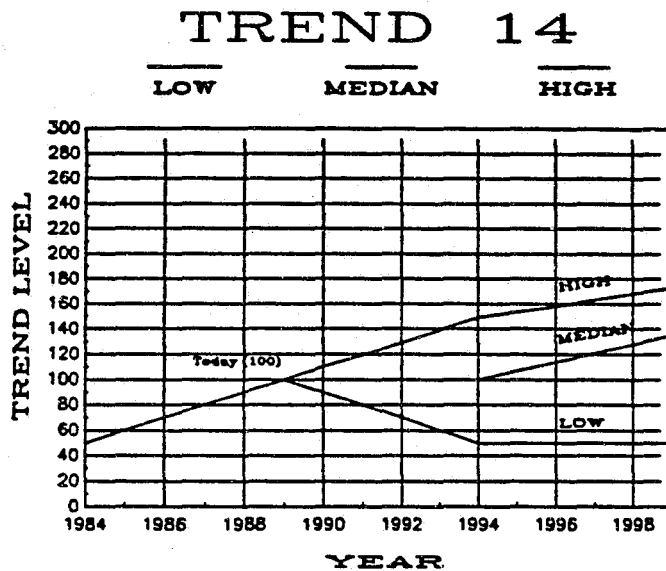
A summary of the data from the trend evaluation follows:

- T14 - Law enforcement acceptance of consolidation. Five years ago it was one-half of today's level, in five years it will be the same as today, and in ten years it will be 37 percent greater than today. The panel thinks it should be higher.
- T2 - Available financing. It was slightly better five years ago, will be 5 percent less in five years than it is today, and will degrade three additional percentage points by 1999. The panel thinks it would be preferable to remain at today's level.
- T19 - Need for aircraft. The need was 20 percent less five years ago but will get increasingly greater over the next ten years by 50 percent.
- T15 - Crime rate in Orange County. It is on a steadily increasing trend. The rate will be 40 percent greater in five years and 60 percent greater in ten years than it was five years ago.
- T3 - General economic situation. It was slightly better five years ago and will get slightly worse for the next five years and then recover to today's level.
- T13 - Consolidation as an alternative. The trend was 38 percent lower five years ago, will be the same as today in five years and then increase 10 percent by 1999. The panel thinks it should be at a higher level than it will be.
- T7 - Highway congestion. As should probably be expected, it is continuing to increase and will be 80 percent greater by 1999.

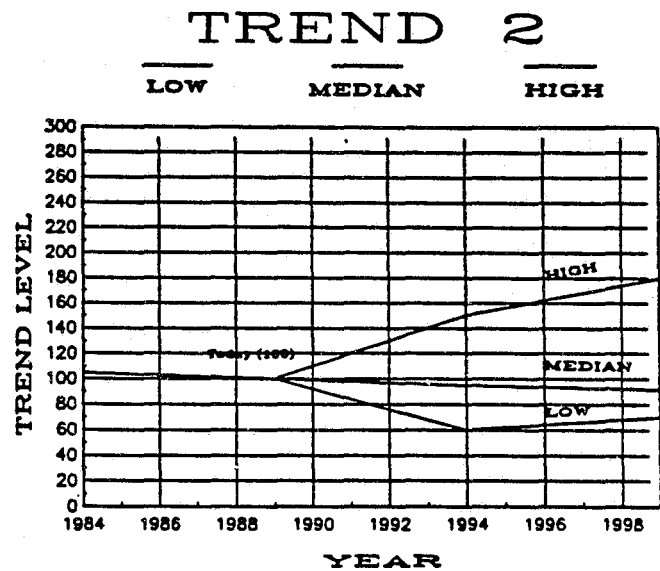
Following are a series of graphs depicting the direction of the trends. The median line is the one depicted on the Trend Evaluation Form on page 17. The highs and lows depict the highest and lowest numbers recorded by individual panel members. The value given for 1984 is the median average.

The graphs below portray the median level of the trends 5 years ago and the low, median, and high levels 5 and 10 years in the future.

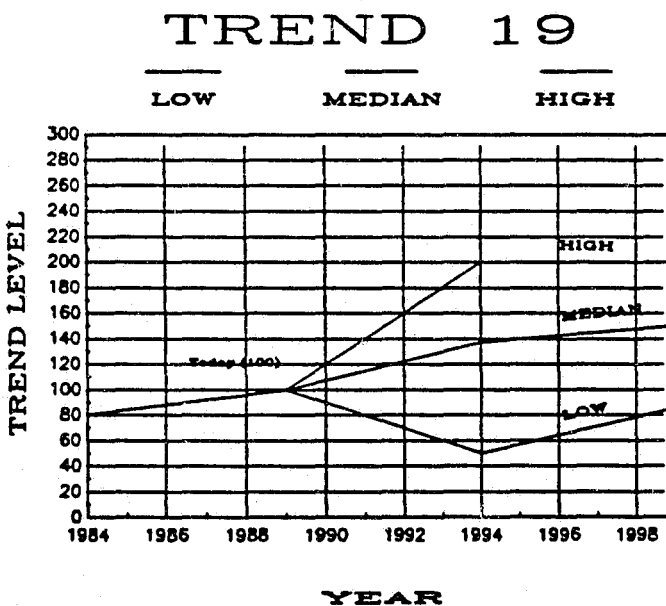
Trend Graphs



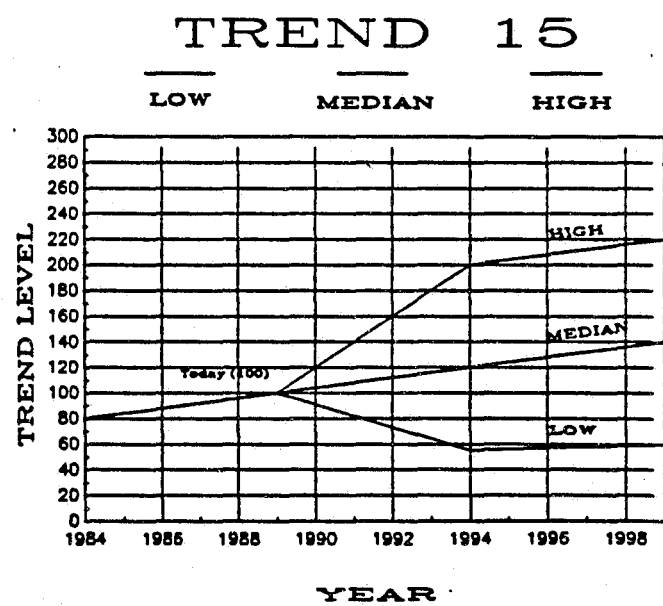
Local Law Enforcement Acceptance of Consolidation



Availability of Financing



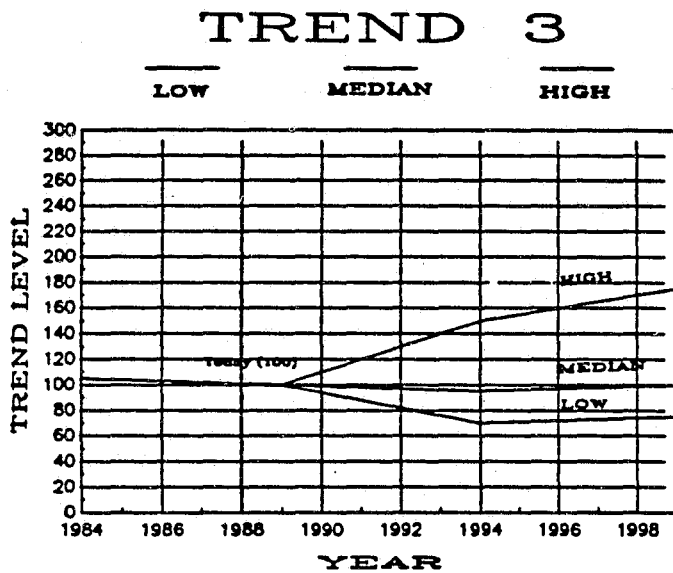
Need for Law Enforcement Aircraft



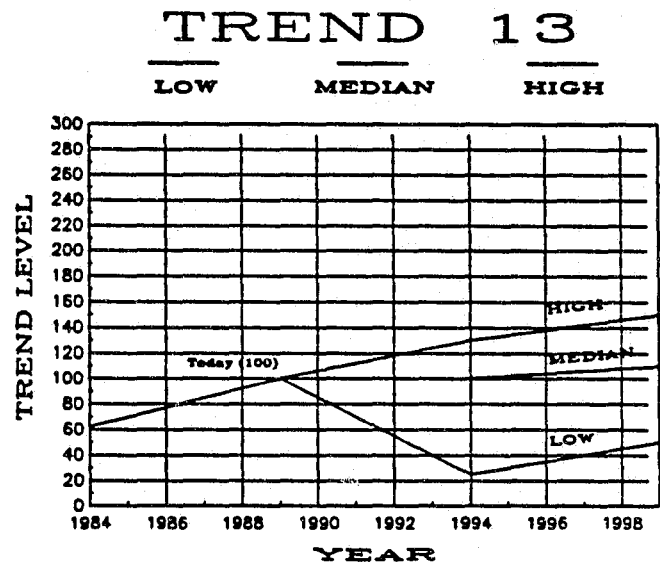
Crime Rate In Orange County

The graphs below portray the median level of the trends 5 years ago and the low, median, and high levels 5 and 10 years in the future.

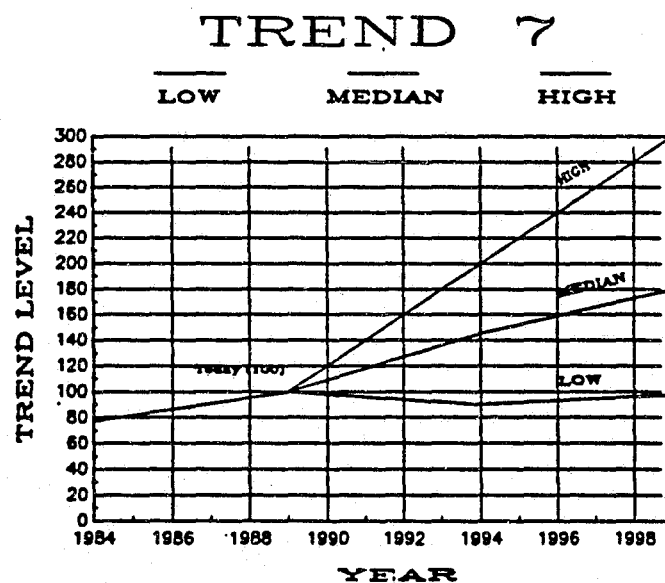
Trend Graphs



General Economic Situation



Consolidation as an Alternative



Highway Congestion in Orange County

Event evaluation results. The NGT panel originally selected eight pertinent events, but two were later deleted because of a low probability of occurrence and negligible impact. The final events studied further were E17, E14, E3, E6, E5, and E7. The events were evaluated by the year which they were first likely to occur. They were then evaluated by the percentage of probability (between 0-100) that they would occur during the next five years and next ten years. The panel members were instructed to also rate the effect of the event as positive or negative by a factor of 0-10.

The Event Evaluation which follows is the same as that used by the panel members. The form displays the six selected events and the median averages of the panel's scores.

EVENT EVALUATION

	EVENT STATEMENT	PROBABILITY			IMPACT ON THE ISSUE AREA IF THE EVENT OCCURRED	
		Year that Probability First Exceeds Zero	Five Years From Now (0-100)	Ten Years From Now (0-100)	Positive (0-10)	Negative (0-10)
E17	Joint powers maintenance of law enforcement aircraft in Orange County	1991	52.5	80	10	
E14	Major flood or earthquake in Orange County area	1995	27.5	50		1.25
E3	Economics require 25% reduction in police budgets in Orange County	1995	10	30		2.25
E6	Legislated state financial aid to law enforcement	1998	35	50	5	
E5	Nationwide oil/fuel shortage	1999	45	80		7
E7	Annual inflation exceeds 20%	1999	20	50		5

The form reflects the selected events, evaluated by probability of occurrence over the next 10 years, and the effect on the issue as negative or positive. Scores are median averages of the NGT panel.

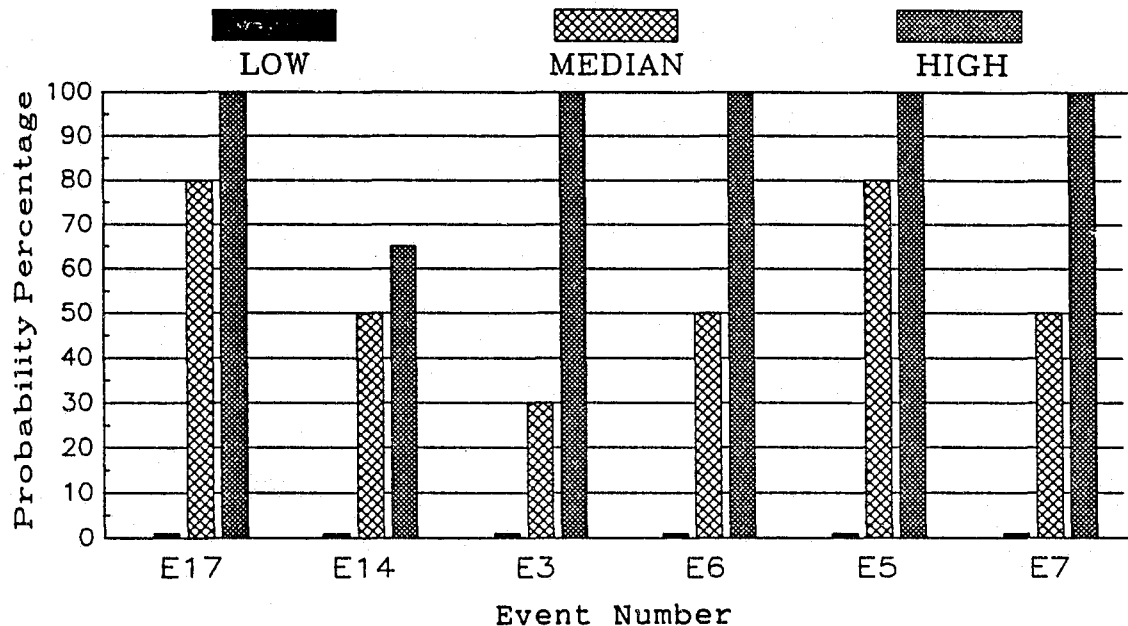
The results of the evaluation were as follows:

- E17 - Joint powers maintenance occurs. The year that the probability of occurrence first exceeds zero is 1991, and there is a 52.5 percent probability of occurrence in five years and an 80 percent probability of occurring in ten years. The impact on consolidation will be positive, as can be seen by the fifth column.
- E14 - Major flood or earthquake. Probability of occurrence by 1995 and a 27.5 percentage probability of occurring by 1994. The probability of occurring by 1999 is 50 percent with a slightly negative impact on consolidation.
- E3 - Twenty-five percent budget reductions. Probability of first occurring by 1995 with a 10 percent probability of occurring in the next five years and a 30 percent probability in ten years. The impact will be negative.
- E6 - Legislated financial aid. Probability of first occurring by 1998 with a 35 percent probability by 1994 and a 50 percent probability by 1999. The impact will be positive.
- E5 - Nationwide fuel shortage. Probability of first occurring by 1999 with a 45 percent probability by 1994 and an 80 percent probability by 1999. The impact will be seriously negative because of the financial impact and possible shortage of aviation fuel.
- E7 - Annual inflation exceeds 20 percent. Probability of first occurring by 1999 with only a 20 percent probability of occurring by 1994 and a fifty-fifty chance by 1999. The impact will be negative. If this should occur simultaneously with Event 3, the net effect could be a 45 percent reduction in available funds.

Following is a bar graph indicating the probabilities during the next ten years of each event and showing the median probabilities as well as the individual highs and lows of panel members. As can be seen, the low was zero for all events, and the high was 100 with the exception of Event 14.

The graph below portrays the low, median, and high probability of the selected events actually occurring within the next 10 years as given by the NGT panel members.

EVENT PROBABILITY GRAPH



- E17 Joint powers maintenance
- E14 Major flood/earthquake
- E3 25% reduction in budgets
- E6 Legislated financial aid
- E5 Nationwide oil/fuel shortage
- E7 Inflation exceeds 20%

Cross-impact evaluation results. The panel members were given evaluation forms like the one displayed on the following page. They were instructed to list all events in the left column and all events and trends across the top. They were told to work across the page, row by row, and determine the numerical level of change, plus or minus, on each event and trend, should each of the events occur.

As can be seen by looking at the upper left portion of the form, the panel decided if a joint powers maintenance agreement came about, the probability of a major flood or earthquake would not change; one would not impact the other.

The Cross-Impact Evaluation displays the median averages of the NGT panel's scores.

CROSS-IMPACT EVALUATION

Suppose that this event

actually occurred How would the probability of the events shown below be affected?

How would the level of these trends be affected?

	E17	E14	E3	E6	E5	E7	T14	T2	T19	T15	T3	T13	T7	
E17	X	0	+25	+27.5	0	0	+95	+50	0	+15	+25	+70	0	7
E14	+25	X	+22.5	+55	+1	0	+37.5	+50	+75	+20	-45	+50	+95	11
E3	+60	0	X	+70	0	0	+82.5	+50	+75	+45	+40	+75	+15	9
E6	+50	0	+50	X	0	+37.5	+55	+77.5	0	+25	+37.5	+62.5	0	8
E5	+70	0	+20	+45	X	+57.5	+50	-22.5	0	+32.5	-55	+50	-62.5	10
E7	+80	0	+75	+75	+50	X	+62.5	-77.5	0	+25	-77.5	+77.5	+10	10
	5		5	5	3	3	6	6	2	6	6	6	3	

(REACTORS)

E17 - Joint powers maintenance
 E14 - Major flood/earthquake
 E3 - 25% reduction in budgets
 E6 - Legislated financial aid
 E5 - Nationwide fuel shortage
 E7 - Annual 20% + inflation

T14 - Law enf. acceptance of consolidation
 T2 - Available financing for air operations
 T19 - Need for law enf. aircraft
 T15 - Crime rate in Orange County
 T3 - General economic situation
 T13 - Consolidation as alternative in gov't.
 T7 - Highway congestion

The results of the evaluation form are summarized as follows:

Event 17, joint powers maintenance, while having a strong probability of occurrence, will only have an effect on two of the other five events and five of the seven trends. The effects on acceptance of consolidation will be an increase of 95 percent in the trend toward acceptance of consolidation. It will also increase the trend toward consolidation in government by 70 percent.

Event 14, a major flood or earthquake, is the most serious event acting upon the others, having some effect on all trends and all but one other event. Specifically, a major flood or earthquake will increase the probability of all events but the rise of inflation to varying degrees. It will also increase the level of all trends with the exception of the general economic situation (T3), which will decline.

Event 3, a reduction in budgets, will considerably increase the probabilities of joint maintenance and legislated aid but have no effect on other events. It will increase all trend levels, particularly acceptance of consolidation and the need for aircraft.

Event 6, legislated financial aid, will increase the probabilities of joint maintenance and reduction in budgets and, to a lesser degree, the likelihood of inflation. It will also increase all trend levels but trends 19 and 7.

The greatest impact will be on availability of financing and consolidation in government.

Event 5, a nationwide fuel shortage, will increase the probabilities of all events but a major flood, particularly the probability of joint maintenance. This event will have a varied effect on the trends. It will increase acceptance of consolidation, the crime rate, and consolidation in government. It will reduce available financing, the economic situation, and highway congestion.

Event 7, inflation in excess of 20 percent, will increase the probability of all events but a major flood, especially joint maintenance, reduction in budgets, and legislated aid. It will also reduce by three-fourths the level of available financing and the economic situation. It will increase the trend levels of acceptance of consolidation, the crime rate, highway congestion (slightly), and consolidation in government significantly.

Using the cross-impact evaluation. The cross-impact analysis is valuable in determining possible outcomes or results if certain events should occur. If the event has a strong possibility of occurrence and has some effect on most other events and trends, it should be given particularly careful consideration in any future planning and policy decisions. This type of analysis is also very helpful in the formulation of alternate scenarios which will follow later in this chapter. Perhaps the most

valuable part of the analysis is that it forces one to focus on some "what if" points of view to avoid being caught unaware or unprepared.

What the panel said. Following is a summary of the panel's discussion. The panel members said they enjoyed the NGT exercise but were somewhat frustrated that they were unable to spend additional time on a give-and-take discussion of the issues. This indicated a more detailed and lengthy discussion at some future time might be productive and informative.

With one or two possible exceptions, panel members were not opposed to the idea of some type of consolidation of the airborne law enforcement units in the five departments represented. The most likely movement of that type will probably be a joint maintenance agreement among two or more of the departments.

The idea of total consolidation of these units during the next decade was considered highly unlikely under nearly all circumstances. One panel member thought it would be a good idea for departments starting out, but not for operations already well established because people are too accustomed to the way things are now to accept such a significant change. As can be seen from the trend evaluation, however, the panel believes there will be an increasing acceptance of consolidation during the next ten years, but nothing significant for at least five years.

Some of the change will be caused by a change from the present administrators, a "new regime" so to speak.

Some panel members took the viewpoint that the only thing that should really matter in such a decision was the service offered to the communities, and these panel members thought consolidation would offer the best service. This viewpoint was not unanimously agreed to. It was the opinion of some that because of local control of how, where, and when the aircraft will be used as well as the closer proximity to potential incidents, the citizens were in fact receiving a higher level of service under the present system.

It was interesting to note that the decision-making process as to any type of consolidation or regionalization seems to be left to the law enforcement department heads and their departments. In the discussion of forces that might cause consolidation, city managers/administrators were not mentioned.

The two primary factors in Orange County, insofar as any consolidation movement is concerned, are acceptance or consideration by the department heads, and economics. The one police chief on the panel voiced the opinion that if an attempt was made to bring the issue before the county chiefs of police at this time, it would not even get on the agenda. The issue that might change that and expedite consolidation would be economics. The consensus seemed to

be that rather than lose air support, concessions and agreements would be made.

Results of the interviews

Interviews of Orange County police commanders. These interviews were conducted with the assistance of a common questionnaire that consisted of seven basic questions:

1. Number and type of aircraft?
2. How is maintenance done?
3. Number of employees?
4. Annual operating budget?
5. Hourly operational costs?
6. Other uses of the aircraft?
7. Annual flight hours?

The following is the result of those interviews

All five Orange County agencies using aircraft now use only helicopters. In the 1970's one agency experimented with a short takeoff and landing fixed wing airplane but found it was not practical for municipal police patrol. Landing in emergencies was nearly an impossibility, it could not hover over a scene, ground observation was poor, and it could not be used for most types of rescue work. All five agencies use the Hughes (now McDonnell Douglas) Model 500 for at least one of their aircraft. These are turbine-powered, four-person aircraft. All of the agencies have at least two aircraft, and three of the five have more than one Hughes 500 model. Three of the agencies use the smaller two-person, piston-powered Hughes 300 models as their second or third aircraft.

Four of the five agencies contract with the same private firm at Orange County Airport for maintenance. The fifth agency does its own maintenance in its repair facility. Not all of the agencies under contract to the private firm are fully satisfied with the work of the firm and are exploring other options. Options being explored include consolidating or contracting with the agency having its own repair facility, contracting with another private firm, and alone or with another agency, establishing another repair facility. Displeasure with the existing contractual arrangement seems to center mostly around cost and reliability. All agree that the most reasonable alternative would be to have one joint maintenance facility operated and used by all five agencies. The handicaps of that alternative are: necessary financing, locating it, and obtaining the agreement of critical personnel. The agency with in-house maintenance has a restricting "conditional use" permit on its location, which allows only its own aircraft to land at the site. This restriction is intended to contain noise which is annoying to nearby homeowners.

The mean average annual operating budget of the five air units, including maintenance and salaries, is \$1.18 million per agency. The low is \$900,000, while the high is \$1.4 million. The average number of employees per air unit is 7.5 including pilots, observers, and support

personnel. The hourly operational cost varies considerably between the turbine and piston-powered aircraft, with the piston aircraft costing one-half to two-thirds the hourly cost of a turbine craft, which is approximately \$400 per hour. Nevertheless, all of the agencies have phased out or are planning to phase out their piston-powered craft. The reason is the advantages of turbine-powered aircraft, such as higher speeds and greater lift ability.

The average number of hours flown annually per agency is 3,193 with the high being 3,375 and the low 3,000.

During these interviews, the types of uses of law enforcement aircraft were discussed. The interviewees listed the uses for law enforcement work as follows:

- search and rescue
- support of ground units in criminal and traffic enforcement
- traffic monitoring and enforcement
- originating work and probable cause for ground units
- apprehending offenders who would otherwise escape
- reducing crime by presence in an area
- surveillance
- directing pursuits
- answering calls that cancel ground units

Other uses given by them that may or may not be directly related to law enforcement purposes are as follows:

- transport of injured parties for medical treatment

- photography, both video and still
- transportation of investigators, special weapons teams, bomb squads, canine, field commanders, emergency operations personnel, government officials, firefighters, and lifeguard rescue teams
- static display/recruiting displays
- fire department assistance
- news media rides
- coastline surveys

While persons interviewed agreed, of course, that aircraft are helpful and effective, measuring the cost effectiveness is another matter. There are many jobs that only an aircraft can do, and it is difficult to determine what it would cost if the aircraft were not available.

The interviewees also agreed as to the general acceptability of aircraft by their communities. Noise is a constant factor but a somewhat diminishing one with the advent of new aircraft designs. These law enforcement executives agreed that aircraft are definitely a part of the future of law enforcement and believed that some type of consolidation, regionalization, or other total or partial combining of operations should be explored further. Future financing was also seen as a continuing and probably worsening future issue.

Interview of the sheriff's deputy chief. The county for which this official is employed is comprised of an area of some 20,000 square miles with a population of 1.3 million people. The sheriff's aircraft unit has a total of

eleven aircraft, including eight helicopters and three fixed wing aircraft. The department furnishes air support for all law enforcement agencies in its county seven days a week from 7:00 a.m. to 1:00 a.m.

In addition to law enforcement support, the unit provides executive transportation, rescues and emergency medical service, fire surveillance, training, photography flights, and demonstrations such as air shows and rappelling. It also provides transportation of extradited prisoners.

Management of the operation is by a sheriff's captain and his subordinates. In addition, there is a helicopter advisory committee which includes a representative from every police department in the county. This committee meets on a monthly basis.

The aircraft unit has its own heliport and maintenance facility and a total of 22 employees, including pilots and support personnel. Hourly operational costs vary from \$70 to \$400 depending upon the aircraft being used. Financing is from the county general fund.

The Deputy Chief, Terry Jagerson, recently authored an article for Air Beat magazine titled "Regionalization: A Case in Point."¹ The article states that the average annual cost per citizen to the five Orange County jurisdictions with helicopter service is \$9.19. His calculations further showed that a regionalized program could be provided to the entire county for almost the same total cost

(\$6,828,035 compared to \$6,130,928) per year, with the average cost per citizen being \$3.05 annually. This would include continuous daytime air coverage.

Interview with the coordinator of the Division of Eastern Connecticut Chiefs of Police Regional Police Helicopter Unit. This interview was conducted by telephone following a previously prepared questionnaire.

The Regional Police Helicopter Unit is comprised of fifteen cities, not necessarily contiguous, in eastern Connecticut. It serves an area of 150 square miles with 235,000 inhabitants and began operation in 1984. A private foundation was formed to purchase and maintain one helicopter. Each of the fifteen cities contribute an annual fee, which is used mostly to pay air crew salaries. The helicopter is housed at an Environmental Protection Agency warehouse at no charge and flies about three hours of an eight-hour shift, four days weekly.

Management of the unit is by a committee which consists of a representative from each of the fifteen participating police departments and is overseen by a sergeant/pilot employed by one of the departments. Initial problems were public acceptance, officer acceptance, and financing. Reportedly all of these problems have been overcome, and the program is now enthusiastically accepted.

Interview of the fire chief. In 1966, two local fire departments agreed to contract with another for dispatching

services. In 1968, a consultant recommended partial consolidation of services. As a result, four fire departments formed a "net" which began in 1971. The fire chiefs and city managers met and agreed on the operational rules, which were formalized in a contract.

The situation that had existed previously was that all the cities were too small to offer the needed protection individually. The individual departments still exist, but there is joint communications, training, and central reporting. They use automatic aid wherein units respond where they are needed regardless of jurisdictional boundaries. This is a joint powers operation and is managed by an oversight and policy committee consisting of the fire chiefs of the involved agencies. Fees are based on assessed property valuation and population size.

The result of this joint powers operation is that calls for service are handled more expeditiously, in-service training has improved, costs are reduced, and more equipment and manpower are available for large situations. Based on the services of this net, a second fire net was established in the northern portion of the county.

Results of the Literature Review

Summary of the literature. The literature was reviewed for information that would produce a better

understanding of the issues and to reveal current information and thinking about the topics of consolidation, economics, politics, and the environment. The references lend insight to those topics as they apply to society at large, not necessarily to government or law enforcement.

Some consolidation perspectives. The literature made it clear that consolidation of government services is a controversial subject. It is also a subject that is not likely to disappear; however, available literature is somewhat limited.

It was mentioned in the introduction that the Orange County Grand Jury recommended coordination of helicopter patrols over the entire county in 1970. Police helicopter programs in the county were in their infancy, and the grand jurors reasoned that if funds to pay for these patrols could be shared, the entire county would benefit from the increased protection.² There is no evidence indicating that public officials followed up on this suggestion, but it may have been the impetus for a proposal two years later. In 1972, the county board of supervisors initiated a proposal for a joint fixed-wing and helicopter program for the county. The proposal was that the cities with helicopters would join with the county, who would furnish an airplane to patrol the cities and unincorporated portions of the county. After being studied for about four months, the proposal was withdrawn with the conclusion that

it was not desirable.³ Exactly why it was not desirable could not be determined.

Departing from the topic of aircraft units, one study found that coordination and consolidation of police services, short of total consolidation, was a concept consistent with the goal of providing better service to local citizens in an efficient and cost-effective manner.⁴ The opinion was that many cities do not want to lose local control by consolidating their police departments, but that sharing designated services could be a workable alternative.

A somewhat different viewpoint concludes that a police agency seriously considering consolidation of any services or functions should not automatically believe that saved dollars is a foregone conclusion.⁵ There are also the "people-problem" impacts which need to be weighed against projected savings. The people-problem considerations should include the public and their feelings as well as that of the staff.

A 1973 California Task Force report found that a reduction in government units through consolidation of local units would produce a system less likely to provide services of a quality and at a cost that suits the diverse preferences of the citizens. The evidence suggested that per capita costs may actually be much higher in larger organizations.⁶

These studies then suggest consolidation or combining forces may not be a panacea and should be looked at closely. In an address to the Command College graduating class in July 1988, futurist Dr. Gene Stephens said the emphasis in the future will be based on the increased use of high-tech equipment and coordination of police with other agencies to get results.⁷ The literature and research indicate the most successful consolidations are those of a limited nature for a specific purpose rather than a total merging of departments.

The state of the economy. Reports, studies, experts, journalists, and even politicians are predicting that the national as well as the regional economic situation is going to get worse, at least for the financing of public services. For example, not only do citizens face the consequences of a huge and growing national debt, but they are now being told they will have to bail out the savings and loan industry at a cost of billions of dollars.

In 1988 in California, voters were asked to approve numerous tax proposals and bond issues during the fall election. While somewhat generous on bond issues, they soundly defeated almost every direct tax hike measure. Some referred to the election result as a bicentennial echo of 1978's tax slashing Proposition 13.⁸ This should probably not be surprising when citizens are given no voice in most of the issues that reduce their discretionary income.

Housing prices in the state, and particularly in Orange County, continue to escalate to a point where most buyers have been priced out of the market. The outcome is that large segments of the population are moving outside the county for affordable housing, resulting in fewer available employees and/or the added transportation costs for those commuting.

The prospects of a sharp rise in fuel costs seem to mount daily. There is now talk of additional gasoline taxes for building highways. We also learn that the ability of the Organization of Petroleum Exporting Countries to produce oil has fallen by about 36 percent.⁹ That situation was caused by weak demand and low prices. Now with the shrunken capacity and swelling demand, sharp oil price increases could be seen as early as 1991.

An interesting financial paradox is the money expended for private security compared to what is spent for police. In the United States, the money spent on private security devices and hardware is \$21 billion annually and is expected to reach \$50 to \$60 billion by the end of the century. The amount spent on all police is only \$14 billion.¹⁰

These situations do not bode well for a police administrator trying to maintain a workable budget.

Political considerations. Personal and political viewpoints sometimes evoke strong emotional responses: An

example: "police helicopters are used as 'Orwellicopters' constantly reminding citizens that Big Brother is up in the sky cruising neighborhoods, shining lights, and peering into backyards. Such intrusive practices would surely decline if police agencies simply had fewer helicopters available."¹¹ One Los Angeles resident has a love/hate feeling about helicopters, saying "They are effective, but their lights and loudspeakers are annoying and seem like a police state."¹² This resident also said crime dropped 20 percent in her area after helicopter patrols were stepped up.

One police official recently said, "police administrators must drop political turf issues and turn to serving the public . . ."¹³ A report in Public Management claims a study has shown that issues affecting a group of municipalities or cut across a multicounty region are emerging with an intensity and frequency not seen since the 1960s. The report says individual municipalities are the most frequent initiators of intergovernmental cooperation to address service problems, alleging that public officials are in the forefront in addressing problems. The report goes on to add, however, that it is not natural for leaders in any community to think extra-territorially, and few individuals have the training and experience to facilitate the design and implementation of intercommunity partnerships. Worst of all, when they exist, these individuals are often not trusted.¹⁴

There is some strong sentiment against partnerships in government operations. Local communities are often reluctant to share control over what they consider to be their police. Studies at Indiana University by Elinor Ostrum revealed that police in small units identify themselves more closely with the public they serve and vice versa. Local communities were found to have exercised greater control over smaller departments which had to be more sensitive to public moods. Many local politicians believe they have more to lose politically from consolidation than they would gain financially. It was also found that local communities prefer voluntary pooling and partial consolidation in selected police components where economies of scale validate the practice.¹⁵

The environmental issues. The environment in Orange County and all of California is changing quickly. Thousands of people are added to the population daily. Toxic waste and trash disposal have become issues that vie for headlines with air pollution, which in turn competes for media exposure with the problem of increasing traffic congestion.

A poll conducted in Orange County in 1988 revealed that county residents, by a 54 percent margin, said traffic is the greatest problem they face as residents, that it has gotten worse in the last two years, and that it will continue to worsen.¹⁶ Many feel that Orange County has

become a place dominated by two major problems: traffic congestion and development.¹⁷ A late 1987 survey indicates the majority of county residents say the county will become a worse, not better, place to live.¹⁸

Market researcher Robert J. Dunham said the county will add 500,000 jobs by 2001, and high rise housing will increase.¹⁹ The Center for the Continuing Study of the California Economy states that California's population will grow faster than that of the nation through 1995, and the Los Angeles basin (which includes Orange County) will grow by 15.7 percent.²⁰

Slow growth sentiment is building, but slow growth initiatives on ballots in 1988 lost in nearly every city and in the unincorporated areas of the county. It is generally agreed that growth can be slowed and managed if citizens are willing to act, but it cannot be stopped.

Summary of research results. The literature review completes the research results phase of this study. The results will now be used to present some possible futures by the use of scenarios. Also, the results will be used in the analysis and selection of policies and strategic plans.

Scenarios

Types of Scenarios

What are scenarios? Scenarios are artificial "case histories" or sets of circumstances that tell stories or depictions of what might or could occur given various set of circumstances interacting with each other. Ideally they will call attention to the larger range of possibilities that must be considered in the future and allow a way of making forecasts happen in full view of the events that cause them.

Three types of scenarios are used here. The first is "surprise free." This type of scenario permits new events and policies but in a manner that is not surprising; this type describes events based on the current forces in motion.

The second type of scenario is the "feared but possible." This scenario assumes that the path or outcome is both undesirable and possible. It seeks to show that future developments can be linked back to the present, usually by a failure to act or prepare for the future.

The last scenario is the hypothetical "best case." This is an ideal development of circumstances from an impartial "what if" perspective. In some cases the elements of the data base will be manipulated or changed to

produce the desirable state.

The nominal "surprise free" scenario. In 1989, slightly over 30 law enforcement agencies in California use aircraft in support of their operations. Several of these agencies, including the California Highway Patrol, the Los Angeles Sheriff's Department, and the San Bernardino Sheriff's Department, have aircraft covering hundreds, or even thousands, of square miles. Other agencies, such as the departments in Orange County, have individual air support units covering areas from less than ten square miles to a few hundred square miles. While somewhat costly to maintain on a per capita basis, the units have proven their advantages to these jurisdictions by their fast response and unique capabilities. There have been some discussions about the possibility and feasibility of partially consolidating some of these operations, but nothing that resulted in change.

In 1991, because of some ongoing maintenance problems, three of the five departments implement a joint powers agreement consolidating their maintenance operations. The apparent success of this operation causes a wave effect throughout the county.

The other two county police agencies begin exploring ways they might join this operation or initiate a similar operation between the two of them. Other county and city officials also began to take notice of the operation and

discuss other operations which might be handled jointly. As a result of a story by the news media, county residents question why such maintenance operations are not used more often.

No further moves toward joint maintenance are taken at that time. Then in 1997, with governments county-wide already suffering from a lack of adequate funding, an earthquake registering 7.6 on the Richter Scale strikes the Orange County region.

Damage from the temblor is severe and widespread with the loss of many lives, the destruction of hundreds of homes and businesses, and a severe curtailment of communications and transportation. There is extensive damage to highways. There had been preparations for the event since it was predicted by seismologists years before. The event once again clearly establishes the value of police helicopters in the county.

The helicopters are used for rescue, transportation of government officials, analysis of damage, and transportation of food and medical supplies to emergency response crews. A problem with their use was the lack of coordination between units, resulting in less than the best and most effective use of the equipment. The two agencies with contract maintenance facilities find maintenance unavailable as a result of damage to the facilities by the earthquake. The joint powers facility, having prepared for

such an event, allows the use of their facility for repairs.

The repercussions that result from the earthquake create new demands for consolidating or regionalizing air units. The first priority is to recover from the effects of the disaster, and the demands are not acted on. In 1999, inflation leaps, and the nation is struck by a shortage of oil. Following this, there is general agreement that law enforcement air operations are vital but threatened.

During the 1999 legislative session, the state legislature proposes state assistance funds for budget-tight police departments but demands a coinciding belt-tightening. The results are, among other measures, a total consolidation of aircraft maintenance operations among the five departments and a formal agreement to provide daily coordination of flight scheduling to ensure more constant air coverage.

The normative "feared but possible" scenario. The year is 2000. The financial condition of local governments in California is at best precarious. State government is deeply in debt from, among other expenditures, having spent billions of dollars during the last decade improving the infrastructure. This debt was incurred by demands for improvements, but an unwillingness to accept additional taxes to pay for them in a timely manner.

The situation in Orange County is the same, and in fact many believe it is worse. There is strong agreement across the county that the standard of living has deteriorated tremendously during the 1990s. Crime has increased by 50 percent, and traffic is at an almost constant gridlock. In spite of improvements of highways, the growth in population and lack of coordination between cities has caused a situation worse than ever imagined during the 1980s.

Added to these financial woes are an oil shortage, not unexpected but unprepared for, and an inflation rate that has soared to nearly 20 percent annually. The county is also trying to recover from a major flood that occurred during the spring of 1999 and left approximately one-third of the region a disaster area. The flood damage added to the traffic congestion problems by destroying and/or damaging many arterial streets.

The economic situation for county law enforcement agencies is bleak due to the city's budgets. Because of the flood and the increase in crime, there has been strong support for additional police officers, but limited funds with which to support them. Some money, however, has been diverted for that purpose from programs deemed as not vital.

In three departments, the shortage of funds has meant the elimination of their aircraft. The two departments

still operating helicopters do so on a limited basis. With this situation, police administrators and other city and county officials more readily accept the versatility and utility of the aircraft and how dependent upon them they had become. These administrators and officials are now seriously discussing how they might merge operations or set up an entirely new consolidated or regionalized air support program that could be financed by the pooling of scarce resources.

The concepts of consolidation and regionalization were discussed rather frequently in the late 1980s and early 1990s, but no one ever got serious about doing it. There was moderate to strong support of the concept among many in law enforcement as well as equally strong sentiment against it. The general feeling at the turn of the decade (89/90) was that the status quo was nice, and it would change only if circumstances forced it.

At that time the local financial situation was sound, and the future economic situation appeared to be good. The anti-consolidation forces have now proven to be correct. The financial situation is forcing a combining of forces. Hopefully, this remedy is not too late.

The hypothetical "best case" scenario. The year is 2000. The state of California has enjoyed a decade of relative prosperity that has been paralleled in most cities and counties, and prospects for the future look positive.

In Orange County, despite the prosperity, taxpayers are still demanding a high return for their tax dollars, and this has resulted in some innovative ways of providing services.

One of these innovations has been the establishment of a consolidated/regionalized airborne law enforcement service that combined the resources of five individual county units into one joint operation in 1999. The existing unit provides air support for the five member departments who finance its operation, and it contracts with several other county cities for a variety of "menu option" services. The services vary from full ground unit support and surveillances to occasional photography and traffic survey missions.

The impetus for the present system began in the late 1980s when several police officials of the five member departments began seriously discussing the concept of consolidation. These discussions eventually led to the formation of a joint powers agreement between two of the departments for maintenance and storage of their aircraft. This operation proved to be well accepted by those departments as well as being cost effective. It also drew the attention of police and city/county officials county-wide and resulted in increased discussions and proposals for further consolidation of the air units and other services.

Meanwhile, as the decade of the 1990s began, certain trends and events were occurring that had a promotional effect on the consolidation concept. The crime rate continued to climb, congestion on county highways increased, and in spite of general prosperity, the budget situation was depressing.

Beginning in the middle 1990s, a series of events took place that caused an examination of government budgets. A flood in 1995 left parts of the county a declared disaster area. Following that in 1996 was another mild oil shortage when the Organization of Petroleum Exporting Countries (OPEC) decided the world was running out of oil and cut production. This, along with other national conditions, led to increased inflation that exceeded 10 percent in 1997. While each of these conditions alone were not devastating, the combination caused serious concern among county residents.

Following these events, the local and county governments were able to obtain federal disaster aid to repair much of the flood damage. They also pursued state aid because of the series of financially draining occurrences and circumstances. The state legislature refused to grant general financial aid, but due to the additional pressure from the public, they did legislate financial assistance to law enforcement agencies.

The financial assistance included conditions which, in the case of airborne law enforcement operations, were

satisfied by the consolidation plan. The concept of consolidation of these units then became widely accepted. In addition to the recent experiences, some lobbying and promising feasibility studies enhanced the acceptance of the plan.

At this point in time, even though this operation is still in its infancy, it has proven to be successful. Air coverage is provided over a wider area and with an enlarged schedule. With rare exceptions, there is at least one aircraft in the air continuously except between the hours of 2:00 a.m. and 8:00 a.m., Monday through Thursday.

Said one police official, "We should have done this a long time ago, and you can quote me."

Summary. In summarizing this chapter, it is appropriate to go back to the question posed at the beginning. What will be the state of consolidation of airborne law enforcement in California by the turn of the century? Based on the research in this chapter and using Orange County as a model, the answer must be that some degree of consolidation is almost certain, and the trend in that direction is increasing. Much, of course, will depend upon what occurs in the environment, what events will come to pass that may force the issue, and how strong the existing trends will be during the next decade.

The research reveals that consolidation of airborne units is not particularly popular, but there is agreement

that it could work and could be beneficial if the issues such as financing and management or control could be resolved. If it is going to happen on any scale greater than sharing maintenance or hangar facilities, it will probably require one of the following; either a "champion," a dedicated supporter, to push it to fruition or a financial situation that means consolidation or eliminating air units.

A review of the issues shows they have been substantially addressed. At the beginning of the chapter, past, present, and future issues were listed. In addressing past issues, it can be said aircraft are effective and helpful in law enforcement. Their best use are tasks such as aerial surveillance, rescue, and rapid response. Aircraft have been accepted by the citizens in Orange County, but with some ambivalence. Cost effectiveness has been argued; each jurisdiction must decide this issue for themselves. Housing and maintenance are still issues of concern and issues still being addressed.

Addressing the present issues, air operations can be consolidated if desired and may become more acceptable because of continued budget restraints. Options to consolidation were not fully explored but seem largely limited to existing systems, total or partial consolidation, regionalization, or an option of private contracting for air service, which was not discussed.

Looking again at the future issues, the NGT panel did not believe air congestion will be an operational factor during the next decade. Highway congestion, however, was seen as increasing the future need for aircraft for rapid transportation during traffic gridlock conditions. The panel also agreed that future financial considerations could force the consolidation concept. The issue of acceptance by the police chiefs and city managers was discussed and examined.

The research indicated that consolidation is not presently popular with most police department heads, at least those with aircraft. The basing of any consolidated operation was not explored during the research. Other factors would indicate the most likely locations would be Orange County Airport or the undeveloped foothill areas of the county.

After reviewing the data gathered in this phase of the study, two strategies were determined to be necessary to move forward:

1. An indepth study of consolidation including feasibility and all financial aspects.
2. A survey of the police chiefs and sheriff to learn what their positions are and why.

These will be explored further in Chapter Two, Strategic Management, which will discuss policies and considerations in implementing strategic policy plans, given the decision to consolidate. Once the decision has

been made, it will be necessary to also analyze the law enforcement agencies involved in the change and to analyze the environment for factors that might impact the change.

CHAPTER TWO: STRATEGIC MANAGEMENT

A model plan for California cities in general and the county of Orange in particular.

The Situation

Weaknesses, Opportunities, Threats, Strengths; Underlying Planning Analysis (WOTS UP)

An overview of WOTS UP. In this section, different methods are used to analyze the environment as well as the study agencies. The results of this analysis will simplify the formulation of rational policy decisions that will follow.

First, the environment was assessed for opportunities or factors that might exist which would aid strategic planning and implementation of a consolidation plan. These opportunities could include factors such as a healthy financial situation and the involvement of important persons who are oriented toward consolidation. Second, there was an assessment for threats that might interfere with, deter, or abort strategic planning. These threats include aircraft noise and a lack of acceptable landing sites.

The final method used was an internal capability

analysis of the five Orange County law enforcement agencies used as a model for this study. The purpose was to obtain some measure of the weaknesses and strengths of the departments. This capability analysis rates factors such as adequacy of manpower, progressiveness of management personnel, and support of the community and local government officials.

If any confusion still exists, it should be alleviated as the process is reviewed in the following pages.

Potential threats in the environment. Several environmental factors of importance to consolidation were identified in Chapter One. Among them were economic and financial issues, some political factors, increasing traffic and population density, and the likelihood of the occurrence of some events that could have a major impact on any consolidation efforts.

Two issues that could be threats to the future of aircraft usage are noise and acceptable landing sites. These are related and have been alluded to previously. While the public does seem to have generally accepted helicopter noise, it is still a constant source of irritation and complaints. Many of the complaints have proven to be caused by military and corporate aircraft. But as the number of aircraft increases, the irritation also increases. The landing sites are usually the focal point of this irritation.

Most heliports suffer from the same malady as commercial airports; they are surrounded by or being surrounded by expanding commercial and residential developments. Future consideration must be given to developing quiet technology for aircraft and hangar facilities that are removed from or minimally disturbing to communities.

Increasing air traffic could be another threat. The increase in air traffic in and around Orange County and the entire region is well known to most residents. This density increases the risk of air collisions, particularly to law enforcement crews who are focusing on ground activities. Already, pilots have to leave the ground observations almost exclusively to an observer while they devote full time to flying the craft safely.

Increasing crime is another potential threat. The NGT panel saw the trend of increasing crime as a factor that would increase the need for aircraft. Undoubtedly it will, but the cost of crime may use up funds needed for aircraft operations. As the amount of crime increases, there is the need for additional police officers, courts, prosecutors, public defenders, and jails. These will all take a larger share of the tax dollar and result in a financial issue as much as a crime issue.

Possibly the primary threat to consolidation is a political one. As discussed previously, desire for home rule is often strong, and that appears to be the case in

Orange County at this time. There are indications of a change in this attitude during the next decade, but historical indications are not favorable.

The opportunities. Some of the factors that are potential threats could also become opportunities, depending upon events that may occur and the continuing development of related trends. Financing is one of these factors.

While the financial outlook is not particularly promising, Orange County is an area that seems to be steadily increasing in wealth. With a trend toward an increasing need for police aircraft and the development of increasingly quiet helicopters and airplanes, the public may want and be willing to finance larger operations to obtain the additional benefits. There are light-weight fixed wing aircraft now available that have been especially developed for surveillance operations and are extremely quiet. Any noise from these types of aircraft would probably not be intrusive.

Acceptability of consolidation by law enforcement persons and city managers could also be an opportunity. While the political climate does not look favorable, there is a growing number of people who believe that consolidation or regionalization should be given further consideration and study. They hypothesize that such plans could be workable. The opportunities for a partial consolidation are much greater and more promising than a total

consolidated system or operation.

Another opportunity may be the matter of timing. Although not an opportunity in the traditional sense, trends and events during the next decade may promote the implementation of consolidated operations. The NGT panel forecasted a greater need for police aircraft, an increasing crime rate, a potential flood or earthquake, and another fuel shortage among others. These occurrences will all increase the likelihood of consolidation of air units. There is the additional issue of some unhappiness with existing maintenance service, and the study agencies are now exploring alternatives. Since research on this project began, the contract maintenance facility has declared bankruptcy, and the four contracting agencies are establishing their own operations. Talk is ongoing about combining the maintenance.

There have also been recent changes in the administration of several county police departments. The recent trend seems to indicate these administrative changes, particularly of department heads, will be more frequent than in past years. There are also indications that new department heads and top executives are increasingly open to the idea of consolidation and regionalization and willing to seriously discuss it.

If the issue of legislated slow growth became a reality, this could create additional opportunities, as

existing heliports, airports, and landing sites would have some breathing room. This may or may not be true. Also, the mere geography of Orange County seems to make it an ideal location for consolidation of police aircraft operations. The entire county is less than 800 square miles, and three of the five police departments with helicopters have adjoining city boundaries. This would simplify coordination and planning for a joint air support operation.

One final factor could be the development of alarms that signal distress directly to aircraft. A system has been developed and is now being put into place in California that allows commercial banks to signal directly to police aircraft when a robbery is occurring. If this technology is available for commercial use, it could also be adapted for home use. The ability to signal a police aircraft 24 hours a day could certainly add to a feeling of security for many people.

These opportunities could directly or indirectly affect the need or desire for additional police air coverage which may not be possible under the existing programs.

The internal capability analysis: weaknesses and strengths. The internal capability analysis was done by having a member of each of the five Orange County departments used in this study complete a two-part rating

form (Appendix B). These ratings were then combined to form a composite rating for the group. The first part of the rating form emphasizes the following categories: manpower, technology, equipment, skills, training, attitudes, city support, community support, pay, benefits, sick use, complaints received, and morale. Each is rated from 1 to 5 within categories of:

1. Superior
2. Better than average
3. Average
4. Problems here
5. Real cause for concern

Four of the five rated at least two-thirds of the categories with ratings of "better than average," and the fifth form had two-thirds of the categories rated as "superior." In the one-third of the categories that were given scores lower than superior, there was only one commonality on all the forms, and that was the category of manpower. The lower scores did tend to fall generally in the areas of council/city manager support and in the area of pay, benefits, and number of complaints received. Only one form showed any scores below average; those were four categories showing a ranking of "problems here." To summarize, all of the departments claim to be relatively strong in the critical areas of equipment, financing, personal skills, and training, but somewhat weaker in the areas of city government support and benefits. Interestingly, all showed "better than average" in the

category of community support.

Moving on to rating two, this form has three general categories of top managers, organizational climate, and organization competence, with three or four subcategories following each. The ratings are again 1 through 5 with the ratings labeled:

- I Custodial - rejects change
- II Production - adapts to minor change
- III Marketing - seeks familiar change
- IV Strategic - seeks related change
- V Flexible - seeks novel change

None of the forms were marked "custodial" in any category. The majority of the categories (over 50 percent) received a rating of "strategic" with the second predominate rating being "marketing." The ratings were relatively equal in all three primary categories with none showing more weakness than another.

The interpretation of this is that the departments seem to be open to change organizationally and administratively. They also show considerable strength, particularly in most of the areas over which they have control. These ratings indicate there need be no serious concerns about the ability of the departments to handle and accept a change such as consolidation.

The Stakeholders

Identification of the stakeholders. Many groups and individuals have vested interests in the use of law

enforcement aircraft, and therefore will be concerned about any consolidation of these services. For the purposes of this study, those persons are identified as stakeholders. The stakeholders likely to have an interest in consolidation of airborne units are as follows:

1. City/county residents
2. City councils
3. County supervisors
4. City managers/administrators
5. Police chiefs
6. Sheriff
7. Police pilots/observers
8. Police officers/sheriff's deputies
9. Fire departments
10. Businessmen
11. Aviation maintenance firms
12. Environmental groups
13. Aircraft insurance companies
14. Aircraft manufacturers

Assumptions about the stakeholders. To properly analyze the interest of the stakeholders, it is necessary to make some assumptions about the positions each might take on the issue of consolidation. The assumptions made are:

1. City/county residents - They will be against any increases in cost and favorable to reductions. If they are fully informed of any changes in service levels, they will want service equal to or better than what they now have. They will also be concerned with noise and privacy.
2. City councils - They will be reluctant to agree to any cost increases but will consider proposals that will reduce costs. They will be favorable to an increase in service level if noise and privacy do not become issues.
3. County supervisors - They will have similar concerns to that of the city councils, but more favorable towards consolidation.
4. City managers/administrators - They will be reluctant to lose any local control but will listen to

proposals that will contain costs and increase service levels.

5. Police chiefs - They will be opposed to total consolidation but may consider limited consolidation if it can be done with no loss of control.
6. The sheriff - His position will be similar to that of the police chiefs.
7. Police pilots/observers - They should be favorable to consolidation, so long as the equipment they have is equal to or better than what they have now and no restrictions are added to use of discretion as aviators.
8. Police officers/sheriff's deputies - They will be favorable to consolidation if air support will be increased.
9. Fire departments - They will be favorable to any changes that may result in more availability of aircraft to assist them.
10. Businessmen - They will favor consolidation as a cost-cutting measure that may improve service.
11. Aviation maintenance firms - They will be opposed to any changes that might result in a loss of work for them, which consolidation is likely to do.
12. Environmental groups - They will want assurances that consolidation will not increase noise pollution.
13. Aircraft insurance companies - They will be very interested in policies affecting aircraft usage, training of pilots, maintenance procedures, and landing sites that might affect their liability, but neutral on consolidation.
14. Aircraft manufacturers - They will promote consolidation if the number of aircraft is likely to increase.

A review of these assumptions reveals that the only groups likely to oppose total consolidation are the city manager/administrators, police chiefs and sheriff, and the private maintenance firms. Even these groups are likely to

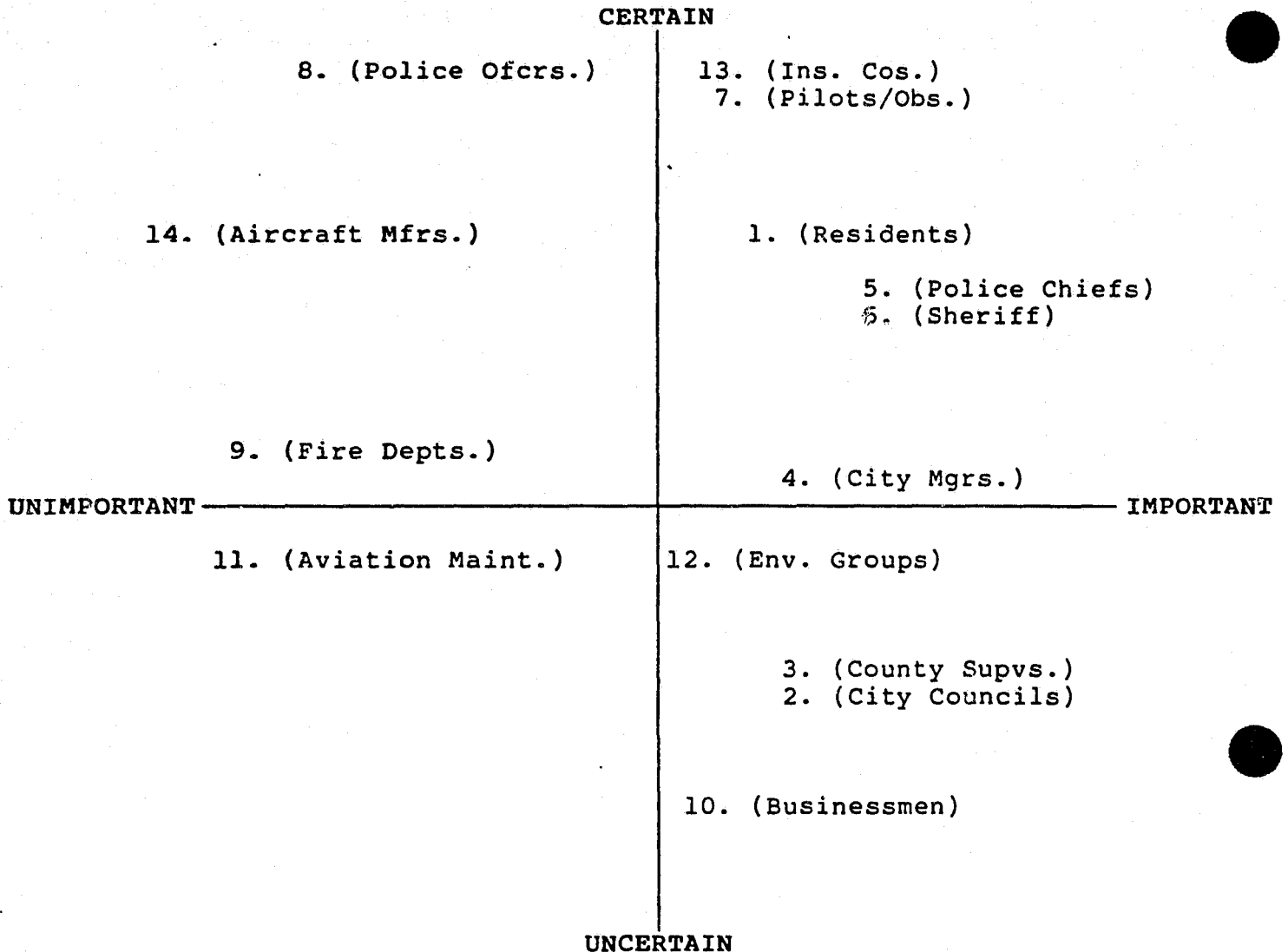
accept some partial consolidation such as housing of aircraft, and all but the maintenance firms are likely to accept combined maintenance operations if the administration of the operation is agreeable to them.

The aviation insurance firms have been selected as a "snail darter" in this list. To clarify further, the insurance companies are the stakeholders likely to be given little consideration or attention until after consolidation strategies are in place and policies decided. They may then propose insurance rates that would be unacceptable or unaffordable to the new organization. Existing prices for aircraft insurance can best be described as astronomical. Because of the high costs, many operators now carry only liability insurance rather than a total package which would include "hull" coverage. That means the aircraft itself is not insured.

If insurance costs should be excessively high, it could abort the entire plan.

Plotting stakeholder assumptions. Following is a map depicting the stakeholders in relation to the assumptions made about them and the certainty or uncertainty about the assumptions. Also measured is the relative importance of the stakeholder groups to the consolidation issue.

ASSUMPTION MAP



It can be seen from the plotting that some groups who are key to strategy will be questionable as to their assigned assumptions. In this case the most uncertainty is about the environmental groups, city councils and county supervisors, and the businessmen. There is also a question about the position of the city managers.

The councils, supervisors, businessmen, and environmental groups have all been plotted as "important" to

the consolidation issue. This means that additional measures must be taken with them. Their accurate positions must be determined and a plan developed to enlist their support. This will also be true of the police chiefs and the sheriff.

The map also displays some uncertainty about the aviation maintenance firms and the fire departments. However, these groups are not seen as critical to the success of consolidation, and no further steps will be undertaken to change their positions.

The Mission

The Missions of the Departments and a Consolidated Airborne Unit

The mission of the five law enforcement departments.
To clarify and focus the purpose and reason for being, mission statements have been prepared for the five law enforcement agencies used in this study and for the proposed or theoretical consolidated airborne unit.

The mission of the law enforcement agencies is to provide a professional, high level of law enforcement service to the four cities and the unincorporated areas of the county. This service will include the enforcement of laws, assistance to the public, investigation of crimes, control

of traffic, arrest of offenders, recovery of property, and protection of constitutional rights. The mission will include the goal of providing a safe and peaceful environment in which to work and live. The sheriff has the additional mission of providing secure housing facilities for sentenced and unsentenced violators of the law.

The mission of a consolidated airborne unit. The mission of the consolidated airborne unit would be to increase the efficiency and effectiveness of the law enforcement agencies in responding to the needs of the communities with rapid, direct, continuous, and dependable aerial support. The mission will include the deterrence of criminal activity, monitoring traffic, and assistance to fire, civil defense, and planning agencies when required.

Strategic Planning

Strategy Alternatives

Formulating the policies. The NGT panel that met to select and analyze trends and events was also used to formulate alternative policies. The same group was used because the panel members were well qualified by their backgrounds, experience, and familiarity with the issues.

For the purpose of policy formulation, the group worked in a modified policy delphi method. The group

members were asked to individually prepare a policy or strategic plan for implementing a consolidated airborne law enforcement unit in Orange County. Of the ten delphi group members, one chose not to write a policy, resulting in the availability of nine policy alternatives. These were then recorded on a blackboard for everyone in the group to see.

The policies generated were as follows:

1. Prepare an agenda item for the county chiefs and sheriffs association meeting and make a presentation. Do a feasibility study. Operate on a regional "task force" concept with costs allocated on a population and hourly basis. Use civilian maintenance contracts.
2. Regionalize the five existing helicopter programs. Other cities within the county could participate on a shared cost basis.
3. Delineate the benefits of consolidation. Convince law enforcement officials of the benefits. Do a public relations program to taxpayers in project areas through television, radio, and talk shows. Submit to a vote for funding and delegation of power and responsibility.
4. Do a political/financial impact analysis with results pitted against or compared with current costs of ships, maintenance, fuel, pilot/observer salaries, and level of provided service.
5. Place the issue before the city councils and board of supervisors. Those governments would form a committee similar to the Regional Narcotics Suppression Program (RNSP)* to administer the program. The committee should include chiefs, as well as a member from each city.
6. Prepare a plan to sell the concept; i.e., a committee to sell the program to city management,

*RNSP is a county-wide regional narcotics unit to which all departments contribute personnel, and it is run by a board of county police chiefs and executives.

and let city managers sell it to the councils. Form a joint powers agreement and have an operation run by a separate group or committee to RNSP.

7. Inform the public of the alternatives to and economic impact of consolidation. Form a joint operation under a civilian agent who would report to the chiefs of police acting as the board of directors.
8. Obtain a successful county service area tax district to fund the program. Develop a unified structure for supervision of a unit which is able to be administered by a council of interested law enforcement executives.
9. Apply for grant funds to finance a model proposal within the county. Include costs of administering and operating the program. Submit the proposal to the Orange County police chiefs, the county board of supervisors, and the city managers for their consideration.

Rating the alternatives. A discussion for clarification purposes followed the recording of the strategies. The group members were then asked to rate each policy based on its feasibility and desirability. The rating resulted in a score for each strategy, and the scores were posted. The strategies generating the highest scores were number one and number six. The most polarized was number seven (i.e., it received the widest range of high and low scores).

The group then discussed those three (1, 6, and 7) strategies again, and a second vote was taken on just those three. For this vote, strategy number one scored highest, strategy number six was second, and strategy number seven was third.

Analysis of the alternatives. The next step taken was to list the pluses and minuses or pros and cons of those three strategies.

PROS

CONS

Strategy #1

- | | |
|--|--|
| 1. A workable concept | 1. Will be a "hard sell" to the chiefs |
| 2. Financing is covered | 2. May be hard to get regional acceptance |
| 3. Could provide coverage to the entire county | 3. A broad, major undertaking |
| | 4. Some prefer in-house maintenance |
| | 5. Regional concept may not be liked by chiefs and city managers |

Strategy #6

- | | |
|--|--|
| 1. A thorough, workable concept | 1. Omits involvement or informing the public |
| 2. Gets everyone involved | 2. Does not mention finances |
| 3. Joint powers is liked by many officials | |

Strategy #7

- | | |
|--|---|
| 1. Involves the public at the first step | 1. Lacks detail |
| | 2. Civilian agent may be unacceptable to some |
| | 3. Seems to leave entire decision |

The next step was to assess the assumed position of the previously listed stakeholders in relation of each of the strategies. The following chart depicts those assumed positions. "Split" means some will be for and some against. "Neutral" means they will neither oppose or promote the plan.

POSITION CHART

STRATEGY #1

Stakeholders	For	Against	Split	Neutral
Residents			X	
City Councils			X	
Co. Supervisors			X	
City Managers			X	
Police Chiefs			X	
Sheriff	X			
Pilots/Observers			X	
Officers/Deputies				X
Fire Depts.	X			
Businessmen	X			
Maintenance Cos.	X			
Environmentalists				X
Insurance Cos.				X
Manufacturers	X			

STRATEGY #6

Residents			X	
City Councils			X	
Co. Supervisors			X	
City Managers			X	
Police Chiefs			X	
Sheriff		X		
Pilots/Observers	X			
Officers/Deputies	X			
Fire Depts.	X			
Businessmen	X			
Maintenance Cos.		X		
Environmentalists				X
Insurance Cos.				X
Manufacturers	X			

STRATEGY #7

Stakeholders	For	Against	Split	Neutral
Residents	X			
City Councils			X	
Co. Supervisors			X	
City Managers		X		
Police Chiefs			X	
Sheriff		X		
Pilots/Observers			X	
Officers/Deputies				X
Fire Depts.	X			
Businessmen			X	
Maintenance Cos.		X		
Environmentalists				X
Insurance Cos.		X		
Manufacturers				X

As can be seen from the charts comparing the stakeholder positions to the strategies, the establishment of a consolidated or regional airborne system is not considered to be easy.

After an analysis of the three strategies and the stakeholder positions, a decision was made to continue with a strategic plan encompassing a synthesis of strategies one and six. These together form a fairly comprehensive plan, and the two complement each other. The combined strategy is seen as involving the following factors:

- Formation of a committee to do a feasibility study.
- The committee as a group will prepare a plan for presentation of concept to the sheriff, police chiefs, and city managers.

- City managers will be asked to present the plan to the city councils and board of supervisors.
- Establish a joint powers agreement consolidating those departments interested and making the service available by contract to other cities.

In discussions with NGT panel members and others during the research phase, there seemed to be more sentiment toward consolidated maintenance by in-house personnel than contracting with a private firm. For that reason, this issue has not been listed as one of the factors and will be left to the decision of those forming the joint powers agreement. Since the NGT panel saw consolidated maintenance as having a 50 percent chance of occurring within the next ten years and gave it a positive rating of "10," it is suggested that maintenance may be the initial step into some type of consolidation.

Strategy Implementation

Logistics of implementation. Successful implementation of the selected strategy will require considerable effort in several areas.

1. The commitment of "champions" willing to promote the plan and serve as committee members will be required.
2. A feasibility study prepared and presented to the chiefs, sheriff, city managers, board of supervisors, and possibly some stakeholder groups.
3. A commitment or neutral stance obtained from the

critical stakeholders opposed to the plan.

4. A survey to find those opposed and those in favor and enlist the assistance of those in favor to sell those who oppose.
5. A financing plan developed.
6. Time lines should be established. Preparation of a feasibility study should take at least one year after a committee has been formed.

Presentation and gaining commitments of stakeholders will consume another six months to one year. Implementation and transition will take one to two years, depending upon the degree of consolidation.

If initial steps were begun immediately, implementation could probably take place by the middle of the next decade and possibly by 1994.

7. The type of system (i.e., joint powers, consortium, or contracting) will need to be decided. In the strategy selected, a joint powers arrangement has been selected. Under this arrangement, all participants will share the costs and liabilities as a single legal entity.
8. After the plan has been well prepared and analyzed, it should be presented to the public.
9. All stakeholders should be informed.
10. After approval, maintenance and hangar facilities must be located. A plan for administration must be developed, a table of organization and responsibility established, and necessary personnel hired or assigned. New aircraft may be needed, and decisions will need to be made on what type and how they will be purchased.

While these steps may not be all-inclusive, they at least furnish an outline for measures that will be necessary to implement and operate a consolidated or regionalized program or system.

Control and evaluation of the strategic plan. To

ensure success and timeliness during the implementation of the strategic plan, it will be necessary to have some type of monitoring system to evaluate progress and accomplishments. In this case, an oversight or steering committee is recommended. The committee should probably include one or more police chiefs of the participating departments or the sheriff. For political and informational reasons, it would be advisable to invite some city management staff members and/or city council members to sit on the committee--on the other hand, they might insist on being committee members.

The committee should probably meet monthly or twice monthly to receive oral and written reports of progress and problems.

The oversight committee composition should probably be proposed by the original committee formed to do the feasibility study and acceptance plan. Their insight and familiarity with the subject should be helpful.

Summary. In summarizing this chapter, a conclusion can be drawn that a workable, practical strategic plan has been formulated and assessed. Because of the assumptions made about the positions of many stakeholders, there is much work to do to ensure acceptance and implementation of the plan.

This leads naturally to the next and final chapter, Transition Management.

CHAPTER THREE: TRANSITION MANAGEMENT

A description of a management structure for a planned transition from five individual airborne units of five jurisdictions to one consolidated operation.

Commitment Planning

Change

The need for change. Up to this point in the study, there have been indications that the demands and needs for law enforcement aircraft will continue to increase in the future. As population, crime, and traffic increase, there will be a need for the availability of aircraft on a 24 hour a day basis as well as aircraft with different capabilities to fulfill a variety of uses and needs. The potential for natural disasters, such as earthquakes and floods, will further add to those needs.

With the system that now exists, it is doubtful the necessary and future desired level of air support can be met. The existing system in most areas of the state, as well as Orange County, does not make available multi-purpose aircraft and does not operate seven days a week or 24 hours a day.

As the competition for scarce financial resources

becomes greater, it is possible that existing air coverage will be reduced, not enlarged, unless the system is changed.

Change in many organizations is often a necessity because of legislation, new technology, or changes in structure. The choice is often not whether to change, but how to change. In this case, it is still a choice of whether to change. The assumption from this perspective is that it will be better to be proactive than reactive and make the change by choice rather than wait until it is forced. With the assumption that change is desired, a management structure must be used to get us from the present state to where we want to be. Defining the stages of change should clarify for everyone affected and involved what the anticipated state will be. Progress will be visible, and anxiety levels should be reduced.

The future state. The expected future state of a consolidated system was broadly defined by the policy formation panel. It will operate under a joint powers agreement, consolidating those departments interested and making air support service available by contract to other cities in the county.

The consolidated airborne unit will be located in an area of Orange County (probably the foothills or at the Orange County Airport) that is acceptable to all parties involved. The facilities will accommodate all aircraft,

personnel, and necessary maintenance equipment. Maintenance will be done by in-house mechanics using those already employed by the participating agencies and hiring additional mechanics as needed. The unit will be managed by a police or sheriff's captain to be selected. He/she will be assisted by one lieutenant and three or four sergeants, all of whom will have pilots licenses and be capable of flying the unit's aircraft. There will be at least six patrol helicopters plus one twin-engine helicopter for rescue and transportation purposes and one light fixed-wing aircraft for surveillances and other requirements. There will be an ample number of pilots and observers to provide round-the-clock coverage seven days a week. All presently assigned pilots and observers will be assigned to the new unit. Differences in pay and benefits may create a morale problem that will need to be resolved.

Administrative oversight of the new unit will be by a board of the sheriff and police chiefs or their designees. This group should meet with the captain in charge at least once monthly for written and oral reports and to amend policies and procedures. This board will also need to set response policies and priorities. All agencies will share alike in the control and liability of the unit. Assets will be owned by the joint powers group. Costs per agency will be based on some formula of population, physical size, and calls for services. Any outside assistance to

non-member departments will be at a fixed hourly rate. This unit should function as a single unit serving all participating jurisdictions as if they were a single governmental entity.

This, of course, is a theoretical organization, and several other scenarios are possible.

The mid-point state. A mid-point is an approximate halfway point in the transition process. The point should be established to check on progress and secondly to have attainment of a goal. It will be helpful for those involved in the transition to have a sense of achievement as the project proceeds. A good mid-point might be after the feasibility study has been accepted, a joint powers agreement is signed, and financing and staffing completed.

At this point, everyone will be getting accustomed to the new organization and know what their roles in it will be. Administration and future supervision should be established, and it will be time to begin putting together an organizational chart and preparing policies and procedures for the new unit. Personnel from the five present organizations should be accustomed to working with one another, and this should make tasks such as choosing a hangar site and selecting additional aircraft much easier.

The present state. To get to the future, we must start with the present. The present organizations, as stated in Chapter One, consist of entirely separate

operations. Each has two or three helicopters and seven or eight personnel. One department has in-house maintenance, and the others contract for maintenance. Air support is supplied five or six days a week, sixteen to twenty hours a day. There is no coordination of scheduling, but the departments call on each other for assistance when their aircraft are out of service. For the most part, assistance to other cities without aircraft is done at no cost when requested and appropriate.

Critical Mass Analysis

Selecting the critical mass. In Chapter Two, reference was made to critical stakeholders and their assumed positions about consolidation and the selected strategies. These critical stakeholders are hereafter referred to as the critical mass. The critical mass can be defined as those individuals or groups whose active commitment is necessary to provide the energy for change to occur.²¹ It can be further defined as those persons whose active resistance or opposition can prevent the change from occurring. The selected critical mass players are:

1. Police chiefs
2. Sheriff
3. City council members
4. County supervisors
5. City managers
6. Police pilots/observers
7. City/county residents

Commitment of the critical mass. In Chapter Two the assumed position map showed most of these critical mass groups were split on their positions as they related to the selected individual strategies. Those positions are assumed to remain the same with the two chosen (1 and 6) strategies combined. The Sheriff and pilots/observers were shown in different positions on strategies one and six. It will be assumed for the transition planning that the Sheriff is now against the strategic plan, and the pilots/observers are split. This will be necessary since the two strategies were combined, and one position will be needed.

To learn their exact positions, a first step should be to either send each of the critical mass individuals, except the residents, a questionnaire or conduct a personal interview. Those in favor of the change could then be used to assist in gaining the support of those who are opposed.

In order to proceed with a transition plan for this phase of the project, it was necessary to make some determination about the degree of commitment by the critical mass. For that purpose, the following chart was prepared reflecting the author's best knowledge of the situation at this time.

COMMITMENT CHART

Critical Mass	Block Change	Let Change Happen	Help Change Happen	Make Change Happen
Police Chiefs	X			0
Sheriff	X			0
City Councils		X	0	
County Supervisors			X0	
City Managers		X	0	
Pilots/Observers		X	0	
Residents		X	0	

X - Present Position 0 - Desired Position

There are many persons involved in most of these groups. Because of this, it was necessary to generalize to some degree about their assumed commitment. A further explanation of these positions should assist in clarification.

The majority of the four police chiefs are generally opposed to the change. This assumption is based on prior feedback and conversations with these chiefs or members of their staffs, which was not necessarily part of the research. They tend to believe the present system is working well and may oppose changing it.

The position of the Sheriff is similar to that of the chiefs with some indications of greater flexibility.

The city councils are generally believed to be in a position of letting change happen, but will be divided on their views of the change. Some can be expected to actively oppose it and some to actively support it; however, most will probably be open to recommendations of their police chiefs and city managers.

The placing of the county supervisors in the "help change happen" category was based primarily on the increasing financial pressures on county governments in California. Of the five law enforcement helicopter programs in Orange County, the last one to be funded was the sheriff's department. For these practical reasons, it is assumed that the board of supervisors may view the change as a cost-saving alternative and therefore desirable.

The city managers and administrators will probably rely heavily upon the position and recommendations of their police chiefs for a final decision. But on their own, it is doubtful they would seriously support or oppose the change.

The pilots and observers will probably be somewhat apathetic unless they see themselves as negatively affected, or some action is taken to get them involved. They could be affected by pay differences and conflicting loyalties.

The residents of the four study cities and the unincorporated county areas were put in the position of

"letting change happen" as the majority will probably be uninterested and uninvolved. At some point they could be valuable "change agents" but only after a thorough feasibility study and a plan are complete.

Commitment Strategies

Use of a consultant. As stated previously, one of the first steps toward consolidation should be a feasibility study. It would be desirable and helpful to obtain the services of an impartial and independent consultant. This is suggested because consultants are often viewed as more qualified, credible, and unbiased than in-house personnel. For this reason, the consultant could lend the study validity and could also be used to make a presentation of the study to the critical mass groups or other stakeholders. A further use of a consultant could be to educate those with a more traditional point of view about the intricacies of consolidation.

To reduce consulting fees, a consultant could probably be hired to review and present a staff-prepared feasibility plan rather than do the entire study.

An information network. A formal or semiformal information network should be established to keep all affected groups and persons apprised of what is occurring and being planned. This must include critical mass persons as well

as persons or employees of the various departments who may be affected some way by the process of change or the end system. The information process could take the form of a newsletter or a combination of written reports of progress and oral reports.

Temporary project management group. A temporary project management group should be established to implement a sample project to demonstrate feasibility and progress and to assist in gaining commitment. An example might be the formation of a shared maintenance operation among two or three of the participating agencies. After allowed to operate for a selected test period, it could be analyzed for negative and positive aspects.

Gaining commitment of the chiefs and Sheriff. The process of moving the opposed police chiefs from the category of "blocking change" to "making change happen" could involve several steps. The first step, as outlined in the strategic plan, will be to get on the agenda of a meeting of the Orange County Chiefs and Sheriff's Association to present the idea of a feasibility study.

The next step will be to have the completed feasibility study presented to the group and explained. This step could be defined as the problem-finding phase. Along with this, a carefully selected consultant or other qualified person could inform them of the various aspects of partial and total consolidation.

A final step might be resistance management. This process would involve information that would:

1. Raise the level of dissatisfaction with the status quo. This might include a discussion of aging equipment, lack of air coverage, and a worsening financial picture.
2. Increase the desirability of the proposed consolidation. Present the possibility of new and better equipment, better air coverage and recognition for innovativeness, and increased efficiency.
3. Explain the minimal risks and disruptions that will be involved.

These three factors must outweigh the social and professional "cost" of making the change, and they must not be contrived, but based on facts.

If all these efforts do not bring a majority of the chiefs to the needed commitment category, the plan must be postponed to a future, more appropriate time.

Attempting to force the chiefs to participate in a plan they do not support will be counterproductive and probably result in failure.

Changing commitment of the city councils. Moving the city councils to the "help change happen" category should be easier once the police chiefs and city managers are committed. They will probably follow their advice. If that is insufficient incentive, the steps of educational intervention and resistance management, as recommended for the chiefs, should be done.

Since the county supervisors are already seen in their needed commitment role, no further intervention will be

undertaken with them.

Changing commitment of the city managers/administrators. As with the council members, the influence of committed police chiefs should aid in increasing the commitment of the city managers. They too should be presented the feasibility study findings and results of the test project. Once again, educational intervention and resistance management could be used.

For this group in particular, it will probably be necessary to emphasize the minimum risk and disruption to present operations and in this case the potential "cost" or risks in not making the change.

When making presentations to this group and the police chiefs, it will be helpful for the presenter(s) to be aware of the different communication styles of people. They are known by different names. J. Thomas Miller III, in "How to Successfully Manage Change," has labeled them analyzer, affiliator, conceptualizer, and activator.²² Descriptions of each will not be given here, but suffice it to say that each type of person accepts information in different ways, and knowing the style of someone resistant to the change could be critical to acceptance of the plan.

Changing commitment of the pilots/observers. The most important step with this group will be to get and keep them involved, keep them participating in the decision process, and keep them informed at all phases of the transition.

Additional steps to gain commitment are, again, educational intervention and resistance management. If those intervention methods are unsuccessful, a final step might be the changing of rewards--that is, perquisites that are dependent upon managerial discretion could be altered or eliminated. These could include assignments and days off.

Changing the commitment of the residents. No change should probably be attempted here unless the plan has been accepted organizationally and the residents then oppose it. If that occurs, educational intervention should work best. This can be done through the various media and by personal meetings and presentations to community representatives. A plan for this intervention should be in place early on in case this situation arises.

Managing the Transition

Management Structure

Choosing a management system. Once a feasibility plan has been accepted and necessary commitments obtained, it will be time to implement the strategic plan and complete the consolidation. A structure must then be put in effect to oversee this transition and implementation phase.

Several alternative structures can be used. The management may be done by one person, either a project

manager, or a chief officer, or it can be managed by a group or committee. The composition of groups or committees can be any of the following: a hierarchy of police executives; a group that has a representative from each of the affected stakeholder groups and other affected constituencies; "natural leaders" selected by the chiefs; a diagonal slice of representative from different organizational levels; or a "kitchen cabinet" of influential and trusted persons with whom the chiefs consult on an informal basis. These transition managers or transition team members should be different than the managers who will be in charge once the transition is complete since the transition state is distinctive and apart from both the present state and the future state. The transition manager should have the authority to obtain necessary resources, the respect of the involved parties, and effective interpersonal skills.

In this case, a hierarchy of police executives was selected as the most effective management system. This hierarchy should probably consist of the Sheriff and the four police chiefs who would be substituted from time to time by staff assistants. It can be anticipated that the persons in these positions will have the necessary attributes prescribed above and will best be able to deal with interdepartmental conflicts.

Once the management structure has been determined, all

affected parties should be made aware of its existence and how it will function.

Transition Activities

Defining necessary activities. Once the transition management structure is formed, the transition process can proceed. Activities that must be accomplished during this phase are:

- a joint powers agreement
- a finance plan
- staffing
- an information plan
- a feedback and monitoring system
- organization chart
- policies and procedures
- training
- hangar site selected
- tools and equipment obtained
- additional aircraft obtained
- scheduling
- contract city policies

To assist in ensuring that these activities are carried out, a responsibility chart has been made designating persons involved and actions to be accomplished. The purpose is to ensure that necessary tasks are named and someone designated to complete them.

RESPONSIBILITY CHART

Actions	Actors	Chiefs and Sheriff	Councils/ Supervisors	City Managers	Pilots/ Observers	Support Staff
Joint Powers		S	R	S	S	S
Financing		S	R	S	-	-
Staffing		R	-	-	S	S
Info. Plan		A	-	-	-	R
Monitor		A	-	-	-	R
Org. Chart		A	-	I	S	R
Policies		A	-	-	I	R
Training		A	-	-	I	R
Hangar Site		R	I	I	S	S
Equip.		A	-	-	S	R
Aircraft		R	A	A	S	S
Schedules		A	-	-	I	R
Contract Cities		I	A	R	S	S

R = Responsibility
 A = Approval (right to veto)
 S = Support (put resources toward)
 U = Inform (to be consulted)
 - = Irrelevant to this item

After the chart has been completed, it should be reviewed with all "actors." The review will probably reveal that some persons do not see themselves in the assigned responsibility categories, and it will be necessary to reach agreement to ensure that all necessary functions or actions are completed by someone. The actor category of "support staff" in this instance is meant to be subordinates of the sheriff and police chiefs.

The transition plan has now been outlined and responsibilities assigned and delegated. The plan itself should logically follow an order similar to that in which the actions are listed on the chart. In particular, the joint powers agreement must first be completed and funding arranged.

Staffing must then be provided to handle the transition as well as staffing for the new consolidated air unit. The information distribution and monitoring system should be established early in the transition period. Simultaneous with these activities, assigned staff members can be building a new organization chart, writing policies and procedures, and arranging training. The search for a hangar site and selection of new aircraft should begin immediately. If a new hangar site is chosen, permits must be obtained and buildings constructed. If new aircraft are needed, the size, make, and model must be determined. These functions will undoubtedly require an extensive

amount of time and manpower. Schedules for personnel assignments will need to be completed before the new unit begins operation.

The policies or rules for contract services for other nonmember cities should be prepared prior to the unit becoming operational. There will be inquiries and curiosity from those interested in part-time air service as well as those interested in full-time air support. Early discovery of those interests will help to ensure that adequate personnel and aircraft are added as needed. It can be anticipated that reimbursement will take the form of a fixed hourly fee based on the cost of operating the aircraft.

Evaluating the change. In Chapter Two, a steering committee was suggested to monitor and evaluate the transition. This same committee or group will probably be best for evaluating the new system once it has begun operation.

The evaluation system will be assisted by the plans for monitoring and information distribution. The length of the evaluation period will need to be decided by the management group and should even be included in the joint powers agreement. A fair evaluation will probably require at least one year after actual operations have begun.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Chapter One: The future of consolidation. Chapter One began by asking the question of where consolidation of airborne law enforcement will be in California by the year 2000. As stated in the summary at the end of that chapter, it is likely that some degree of consolidation will occur. In Orange County, however, the prospects at this time do not look encouraging. However, this could change rapidly as evidenced by the combination of trends and events considered by the NGT panel and the panel's agreement that certain of those factors could be the motivating force to initiate a change. The possibility of consolidation in those areas of California that do not have established air operations is probably more likely than in those already accustomed to their own units.

Each year, additional law enforcement agencies attempt to add helicopters or fixed-wing aircraft to their crime-fighting arsenal. Some have done so successfully while others have not. It seems paradoxical that many jurisdictions with the greatest need seem least able to finance such operations. A vicious circle is sometimes established where increasing criminal activity uses resources needed to purchase more sophisticated equipment to reduce the crime.

It is anticipated that government officials will also become increasingly aware that aircraft serve a variety of purposes beyond surveillance and crime fighting.

It can be speculated that harried executives may one day find helicopters to be an absolute necessity for transportation within their local areas. Some corporate executives have already found this to be true. While transportation by aircraft is very expensive, the net cost could be much less than ground transportation when hours spent sitting in gridlock traffic are considered. In southern California where daily commutes of forty miles are not uncommon, the average travel speed is no higher than 33 miles per hour. It is expected to drop to 15 miles per hour by 2000, as population and vehicle ownership continue to grow. The U.S. Department of Transportation has estimated that more than three billion gallons of oil are wasted annually due to this traffic congestion.²³ This situation may make the use of aircraft for local and regional transportation cost effective.

The issues related to past, present, and future use of aircraft were expressed early in Chapter One. Those issues, mostly in the form of questions, have been answered during the research and in the summary of the chapter. Aircraft are effective and accepted tools that are able to fulfill unique roles, and clearly the need for them will increase in the future.

As the needs increase, governments will be looking at alternate means of obtaining aircraft. With federal grants quickly going the way of the horse and buggy, consolidation or regionalization of air support units may look more and more attractive. The research has shown, however, that while consolidation is only one alternative, it does seem to be the best answer. There remain questions to be addressed regarding service to the community, control of the operation, costs involved, type of consolidation, and the local political situation. Partial consolidation, such as maintenance or parts purchases, may be a better solution than total integration. Evidence also suggests that when an operation becomes too large, it begins to cost more--not less--to operate, and service deteriorates. It would appear that in areas like Orange County, if merging of air units is not implemented, there should at least be some coordination of flight schedules to improve service to the communities. In any case consolidation will surely come to pass slowly and incrementally.

Chapter Two: The strategic plan. In the first part of the chapter, threats, opportunities, and capabilities were examined. The conclusion was that the threats, while several in number, present no serious obstacles to a consolidation effort. The opportunities, such as newer, quieter aircraft, the geography of Orange County, and current maintenance problems, will enhance steps toward

consolidation. The review of the strengths and weaknesses of the study departments indicates that all are capable of accepting and implementing a change of the magnitude discussed.

The majority of the stakeholders, those with a vested interest in the consolidation issue, generally will not oppose it vigorously and may actively support it. Some intervention will probably be required with those stakeholders who are critical to the change and opposed or indifferent to it.

The policy formation panel generated some practical, workable alternative strategic policy plans. The policies generated were more focused on getting consolidation accepted than how it would actually function, but they did offer some solid general guidelines on which to plan further strategy. The primary conflict arose over the issue of "civilian maintenance contracts" in the number one strategy plan. This seems to be in direct opposition to the general thinking of the panel and was not given serious consideration in the overall strategic planning efforts. The conclusion is that when consolidation begins to occur, it is most likely to occur through an integrated in-house maintenance system.

Chapter Three: Implementing the plan. The transition phase of the strategic plan will not be an easy one. If such a task were undertaken at this time, it would be

difficult as well as time consuming. The initiation of such a change will require what was previously referred to as a champion, someone who will promote it and take the time and effort to contact the individual department heads to obtain their backing. This has been done successfully on other occasions for other reasons and can be done again. Once the majority of department heads accept the idea, the task will become much easier. The strategy for gaining support of the chiefs and sheriff is not a strong one and may not be convincing. As stated earlier, if they are not supportive, implementation will be virtually impossible. They could be forced by their city councils to accept consolidation, but this may not be a desirable alternative. There is the possibility that they may be more receptive to consolidation than perceived by the author. If that is true, the strategy outlined in this report may be all that is needed to gain their acceptance.

The logistics of undertaking a change the size and gravity of the one studied are almost mind-boggling. For that reason it is again suggested that it is probably best to start with small steps, such as integrated maintenance, and let everyone become accustomed to such a system.

A factor was implied but never stated in Chapter Three: Parties to the change must believe they will benefit from it in some manner. It might be prestige, power, recognition, better equipment, organizational pride,

or better working conditions, but each must have something to gain. In the case at hand, that should be possible.

Recommendations

Regionalization. This study focused on the prospects of a consolidation by using the five agencies with helicopters in Orange County as a model group. The study was purposely limited in order to keep the research manageable in size. Rather than doing further research limited to consolidation, it would seem logical to explore a regional plan where one or possibly two air units would service the entire county.

This could mean either consolidating the existing air operations into one county-wide unit or eliminating the existing units and starting over with a single operation. This type of system would naturally require the financial support of all jurisdictions in the county. This would entail the implementation of a taxing district or process that would probably require approval of the voters. With the proven accomplishments of the existing public safety air operations, such a plan might very well be acceptable to the public.

Further discussion. It is further suggested that adjacent jurisdictions with air operations, or those considering aircraft, meet and discuss their needs. The

persons serving on the NGT panel for this study found that the discussion time for a particular topic was too short and was beginning to generate valuable ideas when it was necessary to go on to other workshop chores. Many of the panel were representatives of the five agencies used in this study and related directly to the issues discussed.

Monthly meetings of air unit commanders were tried on a previous occasion and are not recommended unless a specific agenda is established. Occasional meetings, particularly after a change in substantial numbers of personnel, might prove to be highly productive and informative. Communications on this, as with many issues, can go far in removing barriers and could result in ideas and changes not yet imagined.

If the discussions led to the implementation of the strategies and plans discussed in this report, then consolidation of airborne law enforcement units would surely become a reality by the year 2000.

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APPENDIX A: NGT PANEL AND MODIFIED POLICY DELPHI GROUP

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APPENDIX B: CAPABILITY ANALYSIS - RATING ONE

STRATEGIC NEED AREA:

Instructions:

Evaluate each item, as appropriate, on the basis of the following criteria:

- I Superior. Better than anyone else. Beyond present need.
- II Better than average. Suitable performance. No problems.
- III Average. Acceptable. Equal to competition. Not good, not bad.
- IV Problems here. Not as good as it should be. Deteriorating. Must be improved
- V Real cause for concern. Situation bad. Crisis. Must take action.

Category:	I	II	III	IV	V
Manpower	_____	_____	_____	_____	_____
Technology	_____	_____	_____	_____	_____
Equipment	_____	_____	_____	_____	_____
Facility	_____	_____	_____	_____	_____
Money	_____	_____	_____	_____	_____
Calls for Service	_____	_____	_____	_____	_____
Supplies	_____	_____	_____	_____	_____
Management Skills	_____	_____	_____	_____	_____
P.O. Skills	_____	_____	_____	_____	_____
Supervisory Skills	_____	_____	_____	_____	_____
Training	_____	_____	_____	_____	_____
Attitudes	_____	_____	_____	_____	_____
Image	_____	_____	_____	_____	_____
Council Support	_____	_____	_____	_____	_____
City Mgr. Support	_____	_____	_____	_____	_____
Specialties	_____	_____	_____	_____	_____
Mgt. Flexibility	_____	_____	_____	_____	_____
Sworn/non-sworn Ratio	_____	_____	_____	_____	_____
Pay Scale	_____	_____	_____	_____	_____
Benefits	_____	_____	_____	_____	_____
Turnover	_____	_____	_____	_____	_____
Community Support	_____	_____	_____	_____	_____
Complaints Rec'd	_____	_____	_____	_____	_____
Enforcement Index	_____	_____	_____	_____	_____
Traffic Index	_____	_____	_____	_____	_____
Sick Leave Rates	_____	_____	_____	_____	_____
Morale	_____	_____	_____	_____	_____

CAPABILITY ANALYSIS

RATING TWO

STRATEGIC NEED AREA:

Instructions:

Evaluate each item for your agency as to what type of activity it encourages:

- | | | |
|-----|------------|-------------------------|
| I | Custodial | Rejects Change |
| II | Production | Adapts to Minor Changes |
| III | Marketing | Seeks Familiar Change |
| IV | Strategic | Seeks Related Change |
| V | Flexible | Seeks Novel Change |

Category:

I II III IV V

TOP MANAGERS:

Mentality Personality	—	—	—	—	—
Skills/Talents	—	—	—	—	—
Knowledge/Education	—	—	—	—	—

ORGANIZATIONAL CLIMATE:

Culture/Norms	—	—	—	—	—
Rewards/Incentives	—	—	—	—	—
Power Structure	—	—	—	—	—

ORGANIZATION COMPETENCE:

Structure	—	—	—	—	—
Resources	—	—	—	—	—
Middle Management	—	—	—	—	—
Line Personnel	—	—	—	—	—

APPENDIX C: RATING SHEET FOR POLICY DELPHI

Alternative 1:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 2:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 3:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 4:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 5:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 6:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 7:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 8:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 9:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 10:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Alternative 11:

Feasibility	DF (3)	PF (2)	PI (1)	DI (0)	SCORE=
Desirability	VD (3)	D (2)	U (1)	VU (0)	

Feasibility:

Definitely Feasible

no hindrance to implementation
no R&D required
no political roadblocks
acceptable to the public

Possibly Feasible

indication this is implementable
some R&D still required
further consideration to be given
to political or public reaction

Possibly Infeasible

some indication unworkable
significant unanswered questions

Definitely Infeasible

all indications are negative
unworkable
cannot be implemented

Desirability:

Very Desirable

will have positive effect and
little or no negative effect
extremely beneficial
justifiable on its own merits

Desirable

will have positive effect,
negative effects minor
beneficial
justifiable as a by-product or
in conjunction with other items

Undesirable

will have a negative effect
harmful
may be justified only as a by-product
of a very desirable item

Very Undesirable

will have a major negative effect
extremely harmful