

130542

THE FUTURE OF HELICOPTERS IN LAW ENFORCEMENT
BY THE YEAR 1995

130542

U.S. Department of Justice
National Institute of Justice

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this copyrighted material in microfilm only has been granted by

California Commission on Peace
Officer Standards and Training

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the copyright owner.

by

CHARLES R POE

COMMAND COLLEGE CLASS 11

PEACE OFFICER STANDARDS AND TRAINING (POST)

SACRAMENTO, CALIFORNIA

1991

11-0210

This Command College Independent Study Project is a FUTURES study of a particular emerging issue in law enforcement. Its purpose is NOT to predict the future, but rather to project a number of possible scenarios for strategic planning consideration.

Defining the future differs from analyzing the past because the future has not yet happened. In this project, useful alternatives have been formulated systematically so that the planner can respond to a range of possible future environments.

Managing the future means influencing the future--creating it, constraining it, adapting to it. A futures study points the way.

The views and conclusions expressed in this Command College project are those of the author and are not necessarily those of the Commission on Peace Officer Standards and Training (POST).

PART ONE - INTRODUCTION/BACKGROUND

How the issue was formed and relevant background information.

PART TWO - A FUTURES STUDY

What will be the future of helicopters in law enforcement by the year 1995?

PART THREE - STRATEGIC MANAGEMENT

A plan for the future use of Airborne Law Enforcement for California cities in general, and the County of Orange in particular.

PART FOUR - TRANSITION MANAGEMENT

A transition plan from the current use of helicopters in law enforcement to a more active role through the optimum utilization of technology, training, funding and public mandates.

PART FIVE - CONCLUSIONS, RECOMMENDATIONS, AND FUTURE IMPLICATIONS

Issue and sub-issue questions are answered, recommendations are given, and suggestions for future studies are examined.

NATIONAL INSTITUTE OF JUSTICE
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE
(NIJ/NCJRS)

Abstract

THE FUTURE OF HELICOPTERS IN LAW ENFORCEMENT
BY THE YEAR 1995
by
CHARLES R. POE
COMMAND COLLEGE CLASS 11
PEACE OFFICER STANDARDS AND TRAINING (POST)
SACRAMENTO, CALIFORNIA
1990

11-0210

The Future of Helicopters in Law Enforcement by The Year 1995

C. Poe. Sponsoring Agency: California Commission on Peace Officer Standards and Training. 1990.

Availability: Commission on POST, Center for Executive Development, 1601 Alhambra Blvd., Sacramento, CA 95816-7053.

Single copies free; Order number 11-0210.

National Institute of Justice/NCJRS Microfiche Program, Box 6000, Rockville, MD 20805

Microfiche free. Microfiche number NCJ

Abstract

The study consists of three parts: a futures study on the utilization of helicopters in law enforcement in the County of Orange, California, by the year 1995; a model strategic plan and a transition management plan to implement study findings. The research addressed these key issues. Five trends should increase in the next five years with regard to law enforcement aero units: public acceptance, cost, mission, technological helicopter advancements, and sources of revenue for law enforcement. High probability events that would impact helicopter law enforcement significantly are: McDonnell Douglas "NOTAR" approved, establishment of training center and federal trust fund. Policy recommendations emphasize expanded revenue and training for airborne law enforcement, formation of a task force and liaison with specific groups. The transition management plan presents a feasible management structure and supporting technologies. [Data, survey, and forecasting results; graphics in text; appendixes; references.]

THE FUTURE OF HELICOPTERS IN LAW ENFORCEMENT

BY THE YEAR 1995

by

CHARLES R POE

COMMAND COLLEGE CLASS 11

PEACE OFFICER STANDARDS AND TRAINING (POST)

SACRAMENTO, CALIFORNIA

1991

Executive Summary

11-0210

PART ONE - INTRODUCTION/BACKGROUND

Helicopters have been in law enforcement since 1966. From the beginning, airborne law enforcement has proven of value across the country, with cities and counties reporting reductions in crime with helicopter use.

California has the highest population of any state in the country, and the population continues to expand. The cost of helicopters continues to increase, as does their need in law enforcement. The public has become concerned over issues of safety, cost, and noise related to their utilization.

Will helicopters continue to be an effective tool for law enforcement, or will cost, safety, training, and public mandates force helicopters in law enforcement to fade away?

PART TWO - A FUTURES STUDY

In this research, national experts were asked questions in the areas of revenue, technology, public mandates, and training. Potential sources of revenue for law enforcement were examined, including a federal trust fund, excess military equipment, and new seizure laws. Future probabilities identified indicate that helicopters will be faster, lighter, and more powerful. Further-

more, surveillance equipment will become more sophisticated, allowing pilots and observers to become more efficient. There is promise for establishment of a national training facility to train pilots at no cost addition to law enforcement agencies.

The study confirmed that the need for helicopters in law enforcement will continue to grow and helicopters will be required to get involved in new areas such as medivac, rescue work, fire-fighting, etc.

PART THREE - STRATEGIC MANAGEMENT

Although obstacles do exist, there are many opportunities favoring the increase of helicopters in law enforcement, such as rising crime rate, technology, redevelopment, public expectations, and the military. Internal strengths outnumber weaknesses, showing that Orange County, California is in a position to make the transition to the greater use of helicopters in law enforcement. The County is rated better than average in a capability analysis, in every category but manpower.

The key stakeholders for HLE were identified as residents, law enforcement top executives, councils/supervisors, and pilots/observers. Special concern may be needed for environmental groups and the FAA, as they may not be in favor of the expansion of HLE.

The mission was identified, relating to the more efficient use of helicopters to assist law enforcement with rapid, direct, continuous, and dependable aerial support. To support this mission, the strategic plan recommended the formation of a county wide task force; the police chiefs and sheriff association support of a nationwide helicopter training center; liaison with residents, military, the FAA, and environmental groups; formation of a strategic plan; audit of current systems; and to actively seek support of the mission by all those involved in HLE.

PART FOUR - TRANSITION MANAGEMENT

This research found that the Orange County Police Chiefs and Sheriff Association will need to champion this recommended plan. The latter would have to undertake a feasibility study showing details of the plan and examples of what may happen if the plan is not adopted. The Association should present the study to other stakeholders such as councils, supervisors, and city managers. The transition to greater utilization of helicopter aero units requires action steps to be determined and assigned to various actors. Constant monitoring and feedback then will be necessary to assure the transition is continuing in the desired direction.

PART FIVE - CONCLUSIONS, RECOMMENDATIONS,
AND FUTURE IMPLICATIONS

This research shows that helicopters can and should expand within law enforcement, becoming more effective and efficient. In Orange County, California, the use of helicopters in law enforcement is likely to expand, while in other areas of the state, helicopter units may slowly be reduced.

The possibilities of what helicopters can do for law enforcement in the future are exciting, due to technology, training, and equipment. Special emphasis will need to be placed in the areas of revenue, public support, training, equipment, and additional missions.

Additional studies should be made in the area of liaison with the military, the nationwide training facility, and technology.

CONTENTS

Part One: Introduction	1
Part Two: A Futures Study	4
Issue Development	4
Futures Wheel	4
Relevance Tree	5
Scanning and Literature Review	6
Personal Knowledge	7
Developing Trends and Events	7
Nominal Group Technique (NGT)	7
Trend Evaluation Form	9
Event Evaluation Form	15
Cross-Impact Evaluation	21
Scenarios	23
Nominal Scenario	23
Normative Scenario	25
Hypothetical Scenario	27
Part Two Summary	29
Part Three: Strategic Management	31
Situation Assessment	31
Opportunities and Threats	31
Strengths and Weaknesses	35
Internal Capability Analysis	37
Strategic Assumption	38
Stakeholder Identification	38
Assumptions about the Stakeholders	39
The Mission	42

Policy Alternatives	43
Recommended Strategy	47
Strategy Implementation	48
Part Three Summary	50
Part Four: Transition Management	51
Critical Mass	52
Commitment Planning	52
Commitment Chart	52
Influencing Critical Mass	53
Transition Manager	55
Responsibility Chart	57
Part Four Summary	59
Part Five: Conclusions, Recommendations, and	
Future Implications	60
Endnotes	66
Bibliography	67
Appendix A	68
Appendix B	70
Appendix C	71
Appendix D	72
Appendix E	73

Part One

INTRODUCTION

Helicopter law enforcement (HLE) began nationwide on March 15, 1966. The Los Angeles County Sheriff's Department, in a joint venture with Hughes Helicopter Company, obtained grant funds from the State of California and the Federal Law Enforcement Assistance Administration to study the feasibility of using helicopters in law enforcement. The Cities of Artesia, Bellflower, Cerritos, Hawaiian Gardens, Paramount, and Lakewood were targeted for this research, which was named "Operation Sky Knight."¹ The study was successful and lasted eighteen months, reporting an eleven percent decrease in crime, compared to the rest of Los Angeles County with an eight percent increase in crime.²

From this Southern California operation the use of helicopters in the law enforcement community spread throughout the United States. Following the success of "Operation Sky Knight," Kansas City, Missouri, Long Beach, California, Santa Monica, California, and Huntington Beach, California, became the first five cities in the United States to initiate helicopter programs. Helicopters have become so important in law enforcement that by 1985 there were 335 law enforcement agencies flying 1400 aircraft.³

Two decades ago there were no guidelines on what the mission for helicopter use was to be in law enforcement agencies. Trial and error led to the discovery of what was useful or not. Generally speaking, police officers used helicopters to fly patrol and assist ground units on calls for service. As time went on, it became obvious that helicopters were capable of much more, so these airborne vehicles became involved in new applications, such as surveillances, pursuits, and assisting agencies outside of law enforcement.

National reports confirmed the value of helicopters: Jefferson County, Kentucky, a 75% reduction in rooftop burglaries since they started helicopters in 1972; Oklahoma City, Oklahoma a 58% crime reduction since air support started in 1972; San Bernardino County, California, a 38% reduction in crime since the aero unit started in 1971.⁴ Helicopters were credited solely for these reductions in crime. Helicopters continue to prove their worth daily, not only in the United States but in other countries. The Royal Canadian Mounted Police, for example, state they regularly intercept boat loads and plane loads of illicit drugs bound for Canada.

With these kinds of statistics demonstrating the effectiveness of helicopters in law enforcement, are there more innovative applications to be realized in the future? Or will problems of high cost, maintenance, and safety factors eliminate helicopters in tomorrow's law enforcement? What is going to affect these answers and what can be done to effect a positive outcome?

These were the questions posed to experts across the United States in the civilian, military, and criminal justice systems. Competent specialists in the field of technology, development, training, and the use of helicopters were consulted. (See Appendix A for a listing of those interviewed.) In addition, scanning of relevant literature was inaugurated, as indicated in the bibliography at the end of this report.

Background Issues

The population of California is continuing to increase, and is soon expected to reach 30 million.⁵ How is that factor alone going to affect airborne law enforcement?

How will the public react to the cost and effectiveness of HLE in the next 5 years? Will this impact the future of HLE? The Orange Coast Daily Pilot newspaper recently conducted a poll of its readers, asking how they felt about the cost and noise of police helicopters. Although the article seemed biased against helicopters, the final vote indicated public opinion in that community just about evenly divided for and against.⁶

How will the military and Department of Defense impact the law enforcement aero unit of the future? Can we learn from the military? Will it be beneficial for law enforcement to establish a liaison with the military? It is hoped the answers to these key questions provided by this study will assist future administrators in deciding the fate of airborne law enforcement and how to help achieve a desired end.

Part Two

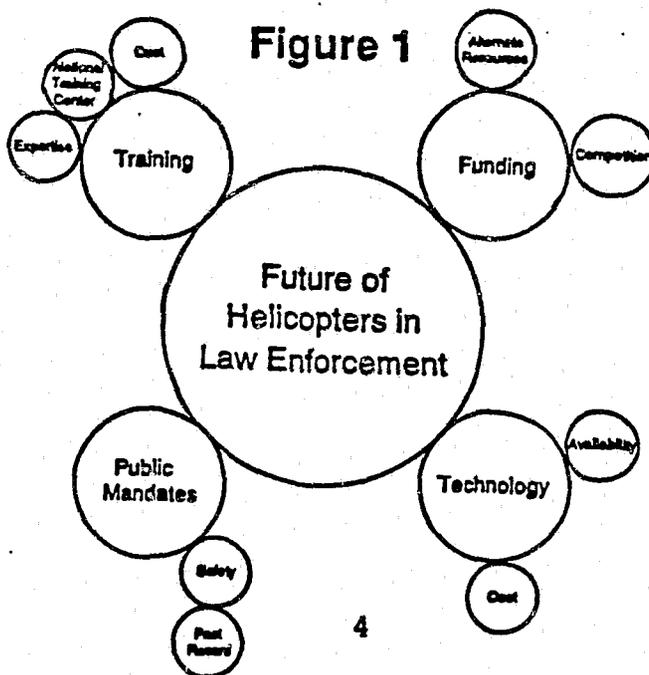
A FUTURES STUDY

What will be the future of helicopters in law enforcement by the year 1995?

Issue Development

This key issue was selected because it is an area of police work that gets little attention, except at budget time, yet seems to have more potential than any other segment to improve law enforcement. Once the main issue of forecasting over the next five years was developed, it was necessary to identify other relevant sub-issues. To assist in this process, a futures wheel was used, as depicted in Figure 1. The issues were then studied as to their relationship with each other and their importance to the main issue.

Once this was accomplished, trends and events that could affect these issues also needed to be identified. To assist in developing these trends and events, the following methods were used:



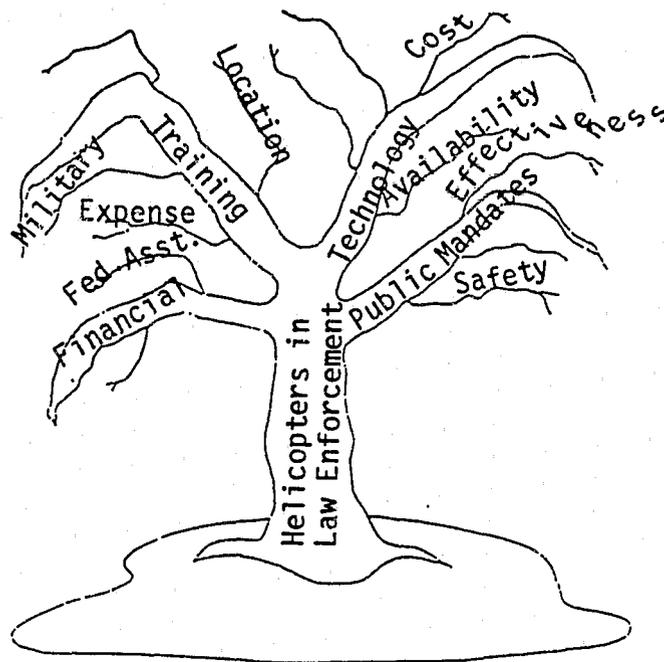


FIGURE 2

Relevance tree. This method, as depicted in Figure 2, is an easy way to provide the writer and the reader with a map that can be used to visually follow the scope of concerns and issues. It also allows the writer a road map to help formulate sub-issues, trends, and events relative to the main issue.

From this relevance tree, it is learned that the following sub-issues are of importance and are relevant to the main issue:

1. Public Mandates - How will changing public mandates regarding cost, safety, noise, etc., affect HLE?
2. Technology - How will advances in helicopter technology within the next 5 years affect HLE?
3. Training - What training innovations will be utilized by HLE in the next 5 years?
4. Finances - What financial changes will occur that will make HLE more or less available?

Stemming from these issues are such items as safety, effectiveness, availability, cost, location, expense, military, and federal assistance.

Scanning and Literature Review. Scanning allowed the writer to talk to associates at work, listen to local news broadcasts, meet with law enforcement people, and review newspaper articles and other publications in the field of HLE. These produced a feel for the target area of Orange County.

Interview Data. The following information was gathered from the scanning and literature review as they relate to the sub-issues listed on page 5:

1. In the area of public mandates, sub-issue one, it was learned that the public seems evenly divided for and against HLE. Cost, noise, and safety seem to be most important to the public.

2. In the area of technology, sub-issue two, many advances are expected. No tail rotor helicopters will become available. Helicopters will be faster, weigh less, and will be more powerful. A 3-axis auto-pilot system will be available. There will be universal radio contact between all aircraft, including military. Surveillance equipment will become more sophisticated, allowing aircrews to see more from higher and safer altitudes.

3. In the area of training, sub-issue three, simulators may become available to HLE. This will allow trainees to learn in simulated flying conditions before doing actual flying. Underwater dive teams from helicopters are expected. Complete "engineout" autorotations for turbine aircraft will be practiced, rather than idling rotations. This allows for a more realistic training. A national training academy for all law enforcement aero units, paid for by private industry could be accepted in the next five years. Pilots from across the country would train at this school at no expense to individual agencies.

4. In the area of finances, sub-issue four, it was learned a "federal trust fund" is in the process of being drawn up. This would allow money confiscated from drug smuggling would be put in a fund for HLE only. This money would be used to create new, and expand current, airborne law enforcement units. Surplus military equipment would be made readily available to HLE. Seizure laws for local agencies, currently in existence, would be changed allowing for easier access and more money for law enforcement.

Personal Knowledge. The writer's own background and experience helped in the interpretation of this data. The writer has been in a management level of law enforcement for five years and has had the opportunity of commanding an aero unit during that time. Furthermore, the writer has some flight experience and as a result of this, is familiar with flight operations. With this experience comes an insight into the potential of helicopters and the desire of those persons assigned to aero units to further HLE.

Once data gathering was completed, a substantial amount of information was compiled and analyzed as to its relevance to the issues. Thus, insight was gained in refining and understanding significant issues for the future of HLE, so as to begin to develop trends and events.

Nominal Group Technique (NGT)

To assist in developing trends and events relevant to the issues, a nominal group was assembled. The group met on August 21, 1990, and was comprised of persons in and out of the field of law enforcement. See Appendix B for the group profile.

The following criteria were offered to the group to be used in developing trends and events and in narrowing down the lists to the five most important in each category:

1. Trends and events must be relevant to the main issue and sub-issues of the study.
2. Events must be discreet occurrences that can, at some point in the future, be determined did or did not occur.
3. Trends must show a consistent pattern over a period of time and they must be non-directional (later forecasting will determine direction).
4. Both trends and events must be clearly defined and comprehensive, and must be included even if there is a low probability of occurrence, if they would greatly impact the issue, should they occur.

The top five trends as listed by the group are:

1. Public acceptance of law enforcement aero units. Will the general public's support of helicopters in law enforcement increase or decrease?

2. Cost of law enforcement aero units. Will the cost of developing and/or maintaining aero units increase or decrease?

3. Mission of law enforcement aero units. Will the mission, or varied uses, of HLE increase or decrease?

4. Technological advancements in helicopters. Will the level of technology in helicopters increase or decrease?

5. Sources of revenue for law enforcement. Will revenue sources for law enforcement increase or decrease?

A "trend evaluation form" was then used to determine trend levels. See Table 1.

TABLE #1

Trend Evaluation

Trend #	TREND STATEMENT (Abbreviated)	LEVEL OF THE TREND ** (Today = 100)			
		5 Years Ago	Today	* 2 years from now	* 5 years from now
1	PUBLIC ACCEPTANCE OF LAW ENFORCEMENT AERO UNITS	90	100	100 / 120	100 / 130
2	COST OF LAW ENFORCEMENT AERO UNITS	70	100	130 / 115	140 / 120
3	MISSION OF LAW ENFORCEMENT AERO UNITS	90	100	100 / 115	100 / 150
4	TECHNOLOGICAL ADVANCEMENTS IN HELICOPTERS	80	100	120 / 125	130 / 150
5	SOURCES OF REVENUE FOR LAW ENFORCEMENT	90	100	100 / 120	100 / 130
			100		
			100		
			100		
			100		
			100		

** Panel Medians

* 2 years from now
"will be"

"should be"

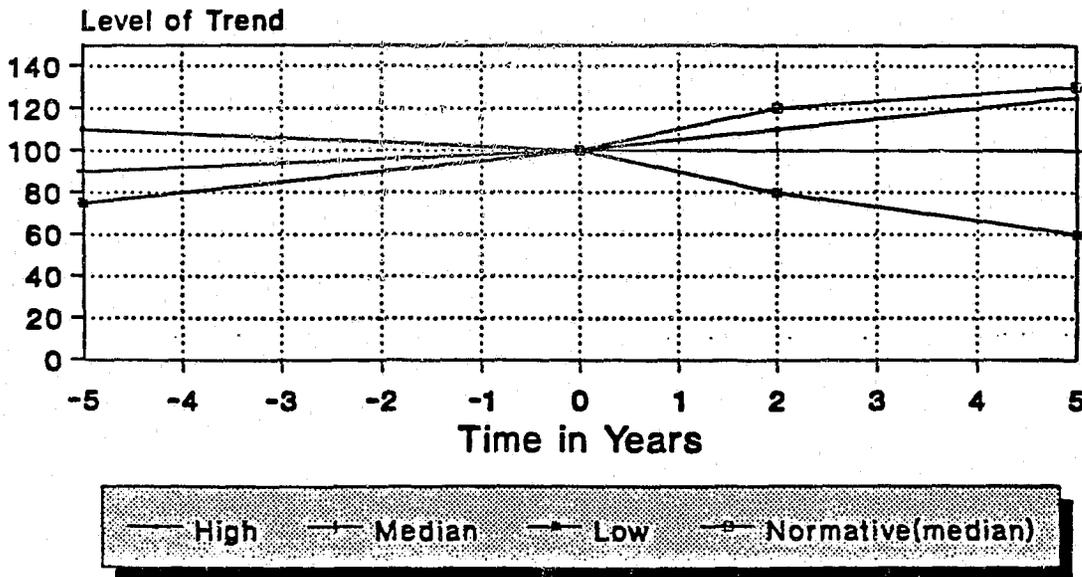
* 5 years from now
"will be"

"should be"

The trend evaluation revealed the following information:

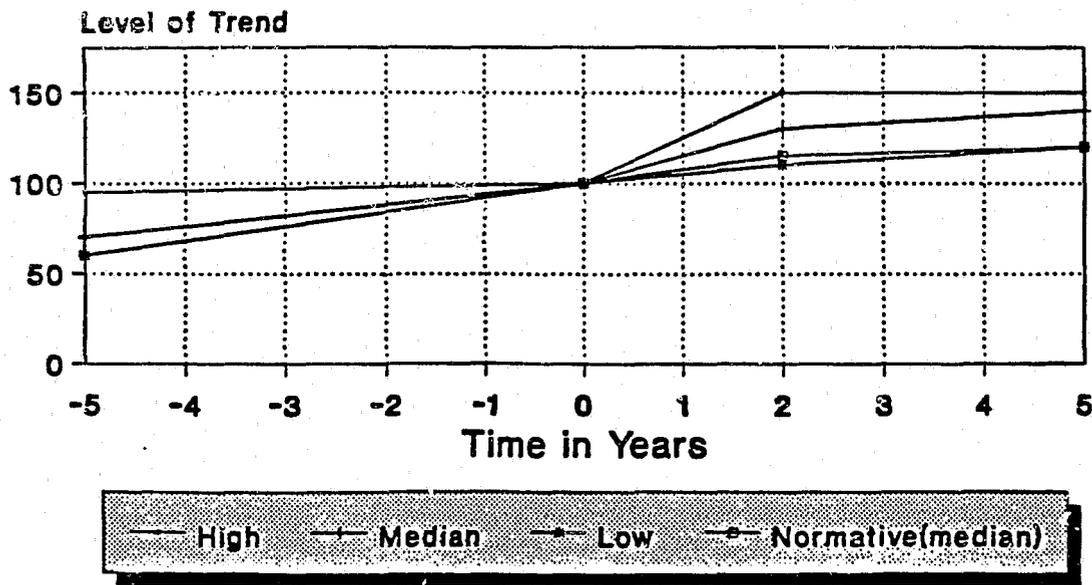
Trend #1: Public acceptance of law enforcement aero units. Some work needs to be accomplished in this area. Although public acceptance has increased over the past 5 years, it will remain the same over the coming 5 years. Public acceptance should be increasing to assist future HLE. This is illustrated in Graph #1.

GRAPH #1 (Trend 1)
Public Acceptance of Law Enforcement Aero Units



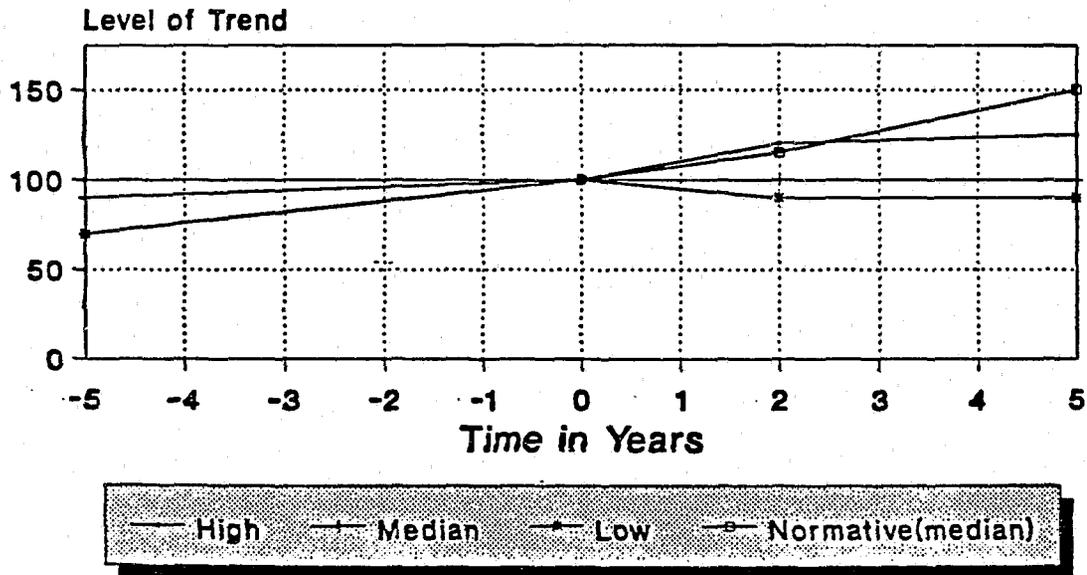
Trend #2: Cost of law enforcement aero units. This shows to be a real trouble area. Cost is increasing rapidly, and will continue to increase over the next five years. As cost is a major concern with the public, this is an area where specific strategies will need to be in place to offset this rising cost. This is illustrated in Graph #2.

GRAPH #2 (Trend 2) Cost of Law Enforcement Aero Units



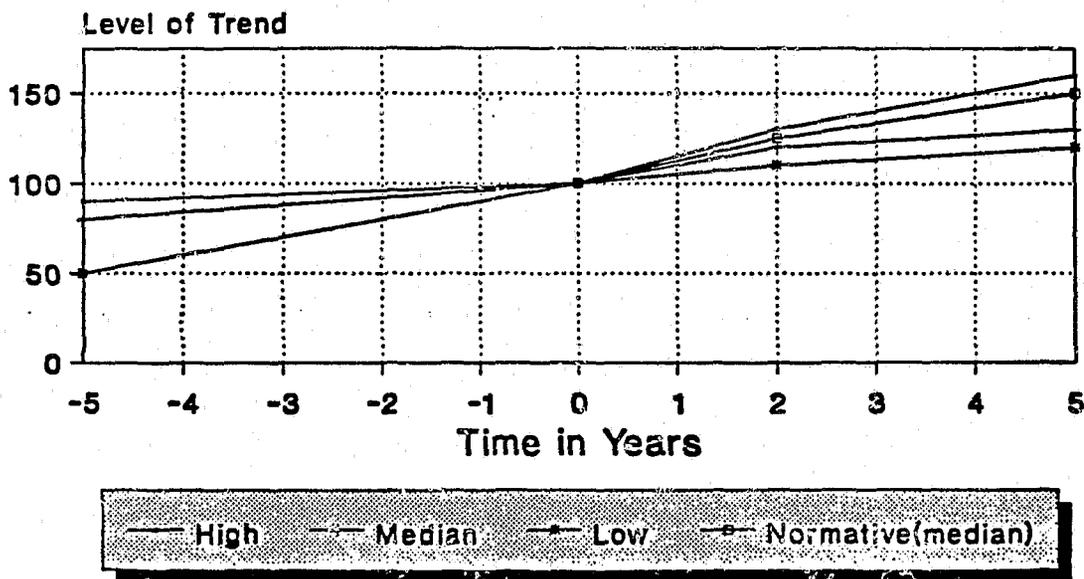
Trend #3: Mission of law enforcement aero units. The trend evaluation shows if nothing is done, aero units will continue to work status quo, no increase or decrease. Aero units can be capable of more responsibility and can do more if strategies are in place. Graph #3 illustrates this.

GRAPH #3 (Trend 3) Mission of Law Enforcement Aero Units



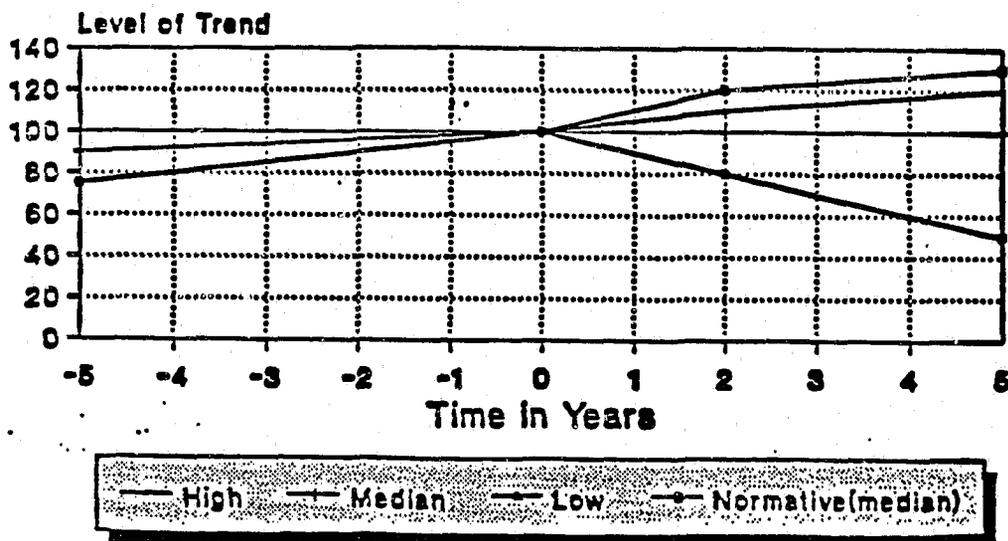
Trend #4: Technological advancements in helicopters. It was revealed that technological advancements will continue to increase, whether we do something about them or not. This will assist HLE as this will not be an area needing special attention, freeing HLE to concentrate on other areas. Graph #4 illustrates this.

GRAPH #4 (Trend 4) Technological Advancements In Helicopters



Trend #5: Sources of revenue for law enforcement. This shows to be another area of great concern. As has been shown, cost is going to increase and, if nothing is done for revenue, no new sources will be discovered. This area needs to be concentrated on to develop new revenue sources to offset rising costs. This is illustrated in Graph #5.

GRAPH #5 (Trend 5) Sources of Revenue For Law Enforcement



The group then identified the top five events:

1. McDonnell Douglas "NOTAR" receives FAA approval.
2. National law enforcement helicopter pilot training center established.
3. Federal trust fund established for law enforcement aero units.
4. Mid-east crisis accelerates.
5. Natural disaster hits Orange County.

The group rated each event by probability of occurrence (0-100%) for two years from now and for five years from now. In addition to this information, the group also listed years until the probability first exceeds zero, and the positive and negative impact of the event on the issue. See Table #2.

TABLE #2

Event Evaluation

Event #	EVENT STATEMENT	• YEARS UNTIL PROBABILITY FIRST EXCEEDS ZERO	• PROBABILITY		IMPACT ON THE ISSUE AREA IF THE EVENT OCCURRED	
			2 Year From Now (0-100%)	5 Year From Now (0-100%)	• POSITIVE (0-10 scale)	• NEGATIVE (0-10 scale)
1	* McDONNELL DOUGLAS "NOTAR" RECEIVES F.A.A. APPROVAL	1	95	100	7	2
2	NATIONAL LAW ENFORCEMENT HELICOPTER PILOT TRAINING CENTER ESTABLISHED	2	50	80	7	0
3	FEDERAL TRUST FUND ESTABLISHED FOR LAW ENFORCEMENT AERO UNITS	2	50	90	8	0
4	MID-EAST CRISIS ACCELERATES	1	90	90	4	6
5	NATURAL DISASTER HITS ORANGE COUNTY	2	40	75	5	6
	* "NOTAR" - NO TAIL ROTOR HELICOPTER					

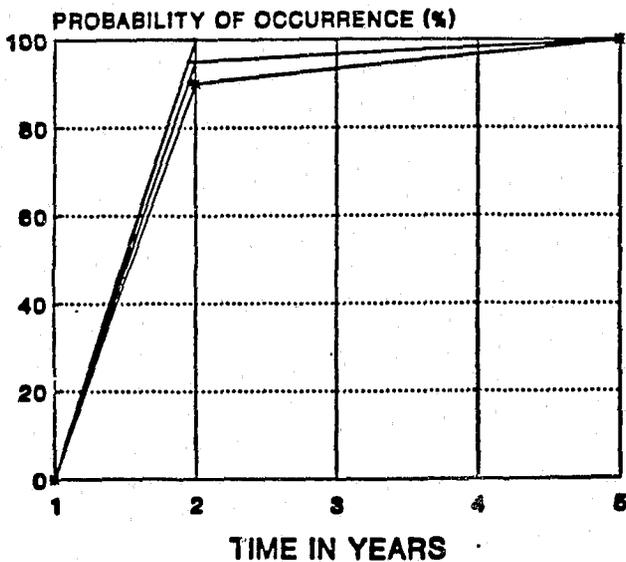
• Panel Medians

The event evaluation revealed the following information:

Event #1: McDonnell Douglas "NOTAR" receives FAA approval.

The event evaluation shows this event will likely occur. The "NOTAR" is a more powerful helicopter and, having no tail rotor, it is safer to operate and is quieter. Safety and noise were shown to be a major concern of the public. The "NOTAR" could improve the use of helicopters and at the same time greatly assist with public acceptance. Graphs 6 and 7 illustrate this.

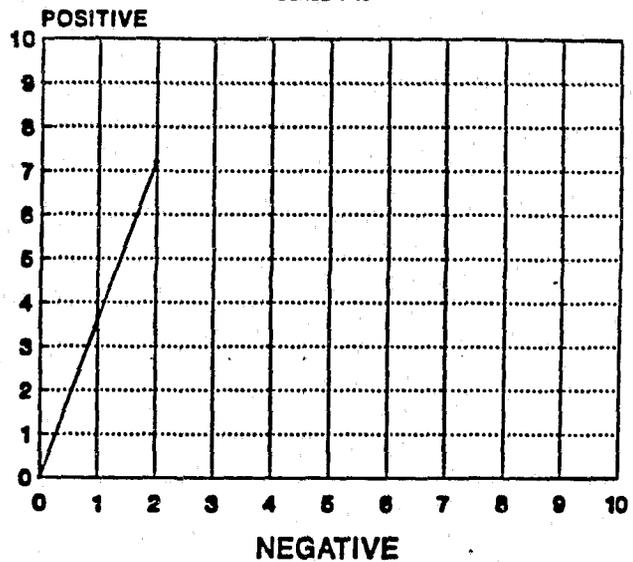
GRAPH #6 (Event 1)
McDONNELL DOUGLAS *NOTAR*
RECEIVES F.A.A. APPROVAL



— HIGH — MEDIAN — LOW

GRAPH #7 (EVENT 1)
McDONNELL DOUGLAS *NOTAR*
RECEIVES F.A.A. APPROVAL

(IMPACT UPON THE ISSUE)
 SCALE 1-10

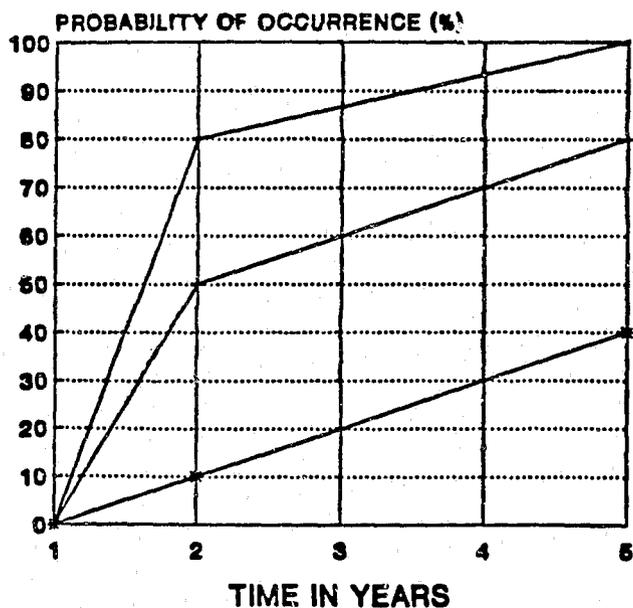


— MEDIAN ESTIMATE

* NOTAR-No Tail Rotor Helicopter

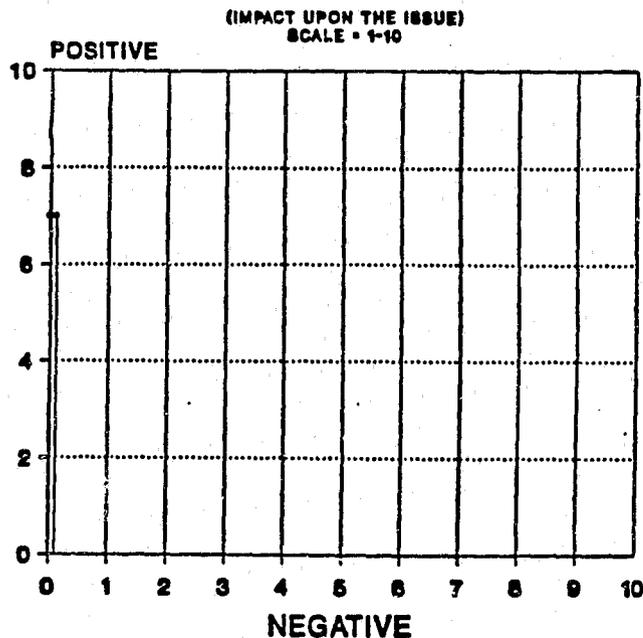
Event #2: National law enforcement helicopter pilot training center established. The event evaluation shows this event will probably occur. This is an important event as it has a high positive impact on the issue and no negative impact. This event will help with cost and safety factors, which again will help with public acceptance. Strategies must be put in place to increase the probability of this event occurring. Graphs 8 and 9 illustrate this.

GRAPH#8 (EVENT 2)
 NATIONAL LAW ENFORCEMENT HELICOPTER
 PILOT TRAINING ESTABLISHED



— HIGH — MEDIAN —*— LOW

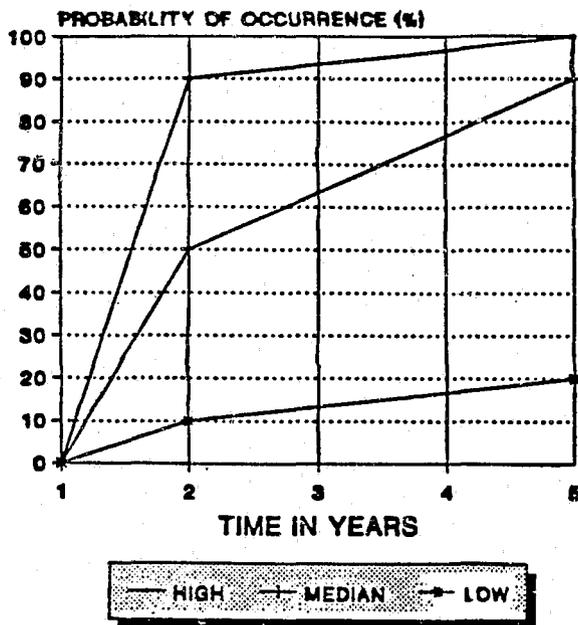
GRAPH#9 (EVENT 2)
 NATIONAL LAW ENFORCEMENT HELICOPTER
 PILOT TRAINING ESTABLISHED



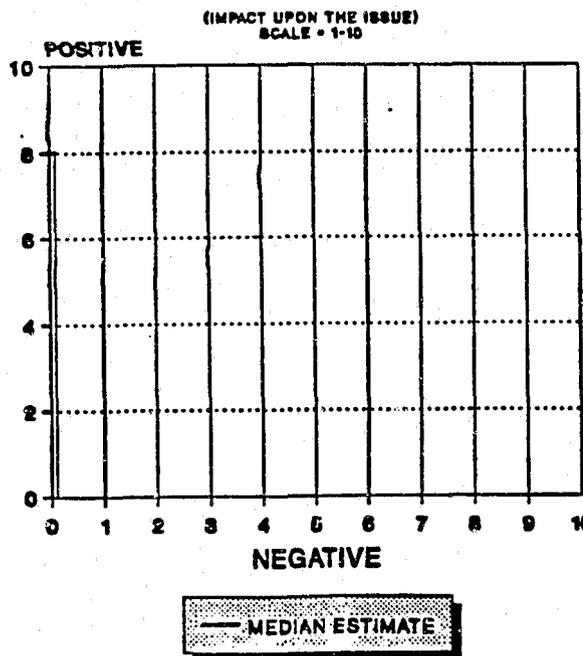
— MEDIAN ESTIMATE

Event #3: Federal trust fund established for law enforcement aero units. The evaluation shows this to be an important event as it has a high positive impact on the issue and no negative impact. It also shows this event will probably occur within the next 5 years. This event would have a major impact on the cost as the revenue would be limited only by the amount of confiscated drug smuggling money. This new source of revenue must be made available, therefore this is an area requiring attention when determining strategies. Graphs 10 and 11 illustrate this.

GRAPH#10 (EVENT 3)
 FEDERAL TRUST FUND ESTABLISHED FOR
 LAW ENFORCEMENT AERO UNITS

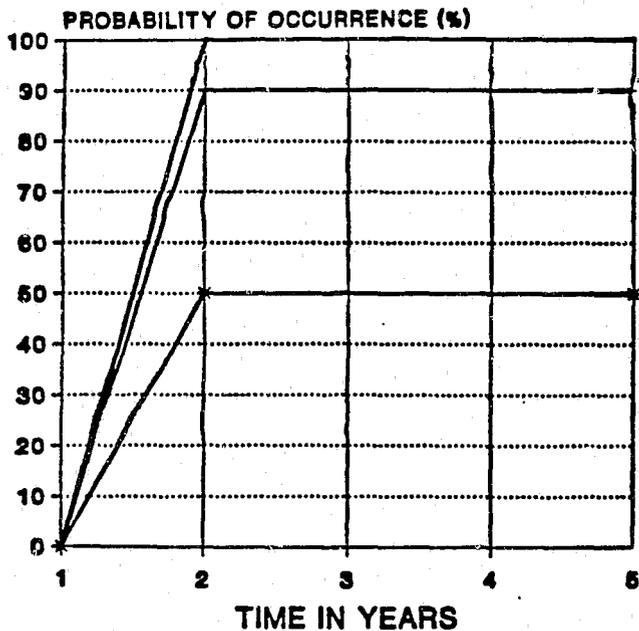


GRAPH#11 (EVENT 3)
 FEDERAL TRUST FUND ESTABLISHED FOR
 ENFORCEMENT AERO UNITS



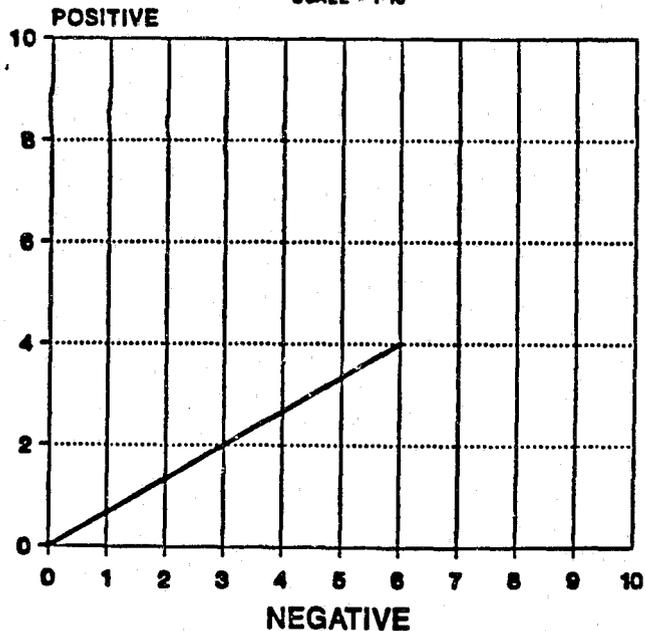
Event #4: Mid-east crisis accelerates. The evaluation shows a high probability this event will occur. The negative impact outweighs the positive impact, as previously allocated monies would probably be directed to the mid-east rather than to law enforcement. Although there is nothing law enforcement can do to prevent this event from occurring, plans can be made to be prepared for it. Graphs 12 and 13 illustrate this.

GRAPH#12 (EVENT 4)
MID EAST CRISIS ACCELERATES



— HIGH — MEDIAN — LOW

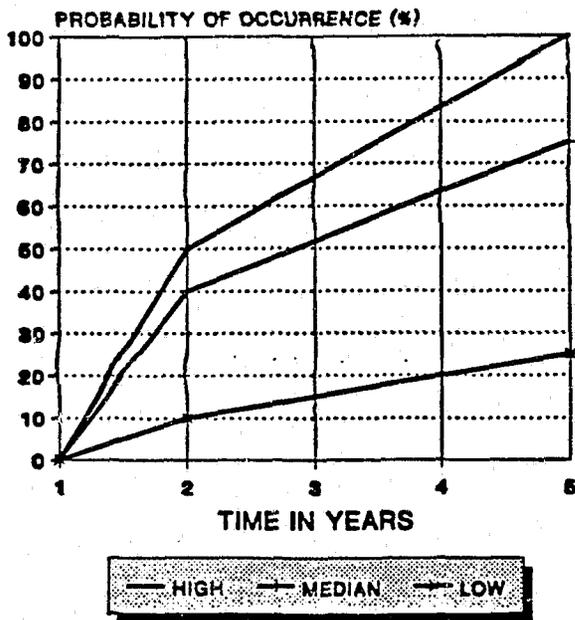
GRAPH#13 (EVENT 4)
MID EAST CRISIS ACCELERATES
(IMPACT UPON THE ISSUE)
SCALE = 1-10



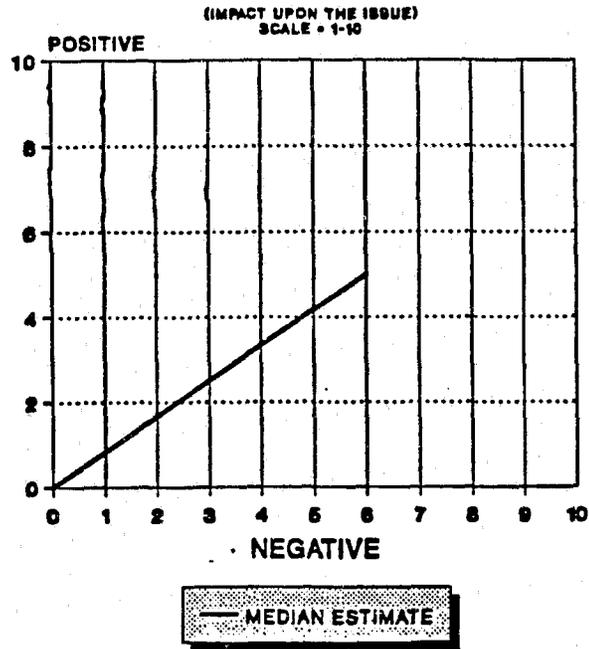
— MEDIAN ESTIMATE

Event #5: Natural disaster hits Orange County. The evaluation shows this event has a fair chance of occurring in the next five years. The positive and negative impacts of this event on the issue are about even. This is another event which cannot be prevented by law enforcement, but can be planned for so law enforcement can take advantage of the positive impact, and attempt to minimize the negative impact. Graphs 14 and 15 illustrate this.

GRAPH#14 (EVENT 5)
 NATURAL DISASTER HITS
 ORANGE COUNTY



GRAPH#15 (EVENT 5)
 NATURAL DISASTER HITS
 ORANGE COUNTY



The writer and two associates performed a cross-impact evaluation. See Table 3. This type of forecasting is valuable as it allows the assessments of how forecasted events impact each other as well as forecasted trends. It also shows which events are actors (influencing many other events and trends) and which events were reactors (most influenced by other events). This is particularly important for strategic management and policy considerations.

TABLE #3

Cross-Impact Evaluation

MATRIX (Panel Medians)														Maximum Impact (% change ±) Years to Maximum	"IMPACT" TOTALS
E1	E2	E3	E4	E5	E6	E7	T1	T2	T3	T4	T5	T6	T7		
E1	X +20 2	0	0	0			+80 3	-20 3	+40 4	+90 2	0			E1 5	
E2	+10 1	X	+20 2	0	0		+20 4	+90 1	+20 3	+10 5	+20 3			E2 7	
E3	+30 1	+20 1	X	0	0		+20 5	+100 2	+50 5	+10 5	+80 1			E3 7	
E4	0	-60 2	0	X	0		0	-20 1	0	-10 2	-20 2			E4 4	
E5	+0	0	+10 2	0	X		+80 1	-10 1	+50 1	+10 3	+20 3			E5 6	
E6														E6 —	
E7														E7 —	
							"IMPACTED" TOTALS								
E1	E2	E3	E4	E5	E6	E7	T1	T2	T3	T4	T5	T6	T7		
2	3	2	0	0	—	—	4	5	4	5	4	—	—		

** Legend

- E1 "NOTAR" gets F.A.A. approval
- E2 Training center established
- E3 Trust fund established
- E4 Mid-East crisis accelerates
- E5 Natural disaster hits O.C.
- E6
- E7
- T1 Acceptance of L.E. aero units
- T2 Cost of L.E. aero units
- T3 Mission of L.E. aero units
- T4 Technological advancements
- T5 Sources of revenue for L.E.
- T6
- T7

FIGURES LISTED ABOVE ARE THE CONSENSUS OF MYSELF AND TWO ASSOCIATES

The following is a summary of the cross-impact evaluation:

Event #1: McDonnell Douglas "NOTAR" receives FAA approval. Although having no impact on any of the other events, this event impacts four of the five trends. This advanced helicopter has a high positive effect on the acceptance and mission of HLE, and is at the forefront of technology. As this helicopter costs more, consideration must be given to looking for revenue sources to help offset the higher cost.

Event #2: National law enforcement helicopter pilot training center established. This is an actor event, having a positive impact on two other events and all five trends. It is apparent serious policy consideration must be given to this event. This event can have a high impact on the rising cost of aero units. Another event that could help affect public attitude toward HLE.

Event #3: Federal trust fund established. This is another actor event, having a positive impact on two other events and all five trends. This event would have the greatest impact on the cost of aero units. Since cost is such an important area, it becomes necessary to make this a high priority item for strategy. With this, other monies can then be directed toward other important areas, allowing for greater use, technology and acceptance of HLE.

Event #4: Mid-east crisis accelerates. This event has the least impact of all the events. As law enforcement cannot prevent this event, it is necessary to see that it will negatively impact the revenue and cost areas. Therefore, even if the trust fund is

established, law enforcement cannot rely on it alone, as the mid-east crisis could drain that source. Alternative sources must continuously be examined.

Event #5. Natural disaster hits Orange County. As with event #4, law enforcement cannot prevent this event, but must plan for its occurrence. The possibility of this event can be used to promote HLE to the public, by showing the many uses of helicopters in the event of emergencies. Since this event is possible and has an effect on every trend, time and money must be spent to train aero units for this possibility. If the public is to accept aero units, they must show their worth during the actual emergency.

SCENARIOS

Obviously there are many different courses of action that can take place in the future. To help understand and "see" what these different possibilities are, scenarios have been developed which show alternative futures. These resulted from trends and events as generated by the NGT, and the imagination of the writer.

These scenarios are intended to show the many opportunities and possible dangers that could be in store for airborne law enforcement in the future. They also show the need to design policies to help guide the future away from the undesirable and toward that which is desired.

Nominal Scenario Training Suffers from Budget Crunch.

The nominal scenario is a short story which is intended to describe what will most likely be in the year 1995 if nothing is

done and events and trends continue without any planned strategies.

October, 1995 - Chief Pilot Jim Adams showed up for work at the heliport, just as he had been doing for the past 16 years. Jim was worried. He has seen a lot come and go since joining the Huntington Beach aero unit in 1979. He knew that he would spend his shift flying patrol over the city, just as he has been doing for his entire aero career. Jim was discouraged as he knew there was much more he could be doing as a helicopter pilot in law enforcement, but budget restraints and limited personnel have prevented his ideas from being put into practice.

Jim also felt not enough was being done for training. Jim felt the pilots should be doing more training based upon new ideas and concepts from military experimentation with helicopter applications.

Two years ago Jim's unit had to sell their training helicopter, the very one Jim used for training each quarter, keeping all the pilots current as required by FAA rules. Jim knew that without the availability of this helicopter, training was going to become more expensive - training was now going to be done in one of the two remaining patrol helicopters. This would put more hours on the patrol helicopters, and the possibility for damage was going to be higher on them due to the training. As a result of this, Jim suspected that much of the extra training, above the required training, was going to be eliminated.

In addition to all this, Jim knew that budget time was coming up and his unit was scheduled to buy a new helicopter to replace

one of their patrol helicopters. This new helicopter, a McDonnell Douglas "NOTAR," was the newest thing in helicopters. It was safer and more efficient than previous helicopters, and was more powerful and could therefore perform more functions. The problem, Jim knew, was money. The city had not explored new resource avenues and it was questionable whether the city could afford the new helicopter without outside money. Their current patrol helicopter, scheduled to be replaced, had more flight hours than any other helicopter of its kind, and it was starting to have minor mechanical difficulties. This obviously concerned Jim as his safety and that of others was in question here.

Jim knew some things were being done, such as the use of local seizure money, but it might be too little, too late. As a result of this, Jim felt his unit would continue as it had been, simply working patrol and not expanding into those areas where the helicopter could really have an impact on crime and the community.

Normative Scenario - Hard Work and Training Pays Off.

The normative scenario tells a story of how the future should be. By being aware of future events and trends, certain policies have been put into effect that have helped to prevent undesirable occurrences and have allowed a more favorable future to take place.

December 1995 - As Christmas nears, Chief John Denning has a lot to be thankful for. Not only has he finished his Christmas shopping early for the first time in years, his department has been able to make some giant steps forward in training, revenue, public opinion, etc., over the past five years since he took over

the top post in 1990.

John and the other Chiefs of Police from Orange County joined the rest of the state in helping to get several measures passed that allowed for more revenue for local governments, and specifically for law enforcement. In addition to this, John used his position to help in passing the new federal trust fund for law enforcement aero units. His departments aero unit's accomplishments over the past few years have been exemplary.

John was the first police chief to form a liaison with the military and tap into that new source of airborne information. As a result of this, Johns aero unit is at the forefront in training for all aero units across the United States. New methods of training, such as physiological and psychological, have put his unit among the best in California.

With the extra monies received from additional revenue sources, the department purchased an additional training helicopter and was still able to replace the old patrol helicopters with the new McDonnell Douglas "NOTAR." This has allowed the unit to expand their training. With the use of the new "NOTAR," the unit can perform new missions, such as rescue work and medivac.

This has created a great deal of support for his aero unit from the community. Knowing this, manufacturers are offering his unit new technologies at special rates, so as to use his aero unit as a springboard for their products. Chief Denning has developed close working relations with McDonnell Douglas and, as a result, McDonnell Douglas has been furnishing equipment to John's unit to further enhance training.

John is aware that other aero units are also prospering. The public in general has become more aware of the need for law enforcement helicopters and this, coupled with alternate revenue sources, has allowed aero units to expand in size and in the types of missions they are performing.

John's unit is now actively training with the fire department, the lifeguards, the SWAT Team, and Civil Defense.

Yes, John has a lot to be thankful for. Five years ago, his department and others were at the crossroads. Now with sufficient revenue, proper training, and public support, his personnel are not only competent, but are innovative in the use of helicopters to improve not only law enforcement, but community service as well.

Hypothetical Scenario - The Sky Falls Down.

The hypothetical scenario is a "what if," worst case scenario. This scenario is different than the others in that we tend to apply "Murphy's Law" here: What can go wrong, will go wrong.

September, 1995 - It was probably the worst summer to have ever hit the city in over 20 years. Not only were record temperatures broken, but the increase in population resulted in more people than ever heading toward the beach community. With this high heat and record crowd, crime just naturally soared. The situation worsened when the aero unit budget was cut again, just as the mid-east crisis had finally broken out to a war. All the promises of federal assistance in the way of trust funds, seizure money, excess equipment, and personnel had been put on hold. All the Department of Defense money and equipment were being sent to Saudi Arabia. There was nothing for law enforcement, and helicop-

ters suffered the most because of the high expense.

That alone probably would have marked the slow decline of airborne law enforcement in Orange County. However, six months ago two law enforcement helicopters collided in mid-air. The crew members of both helicopters were killed along with one on the ground. Several other citizens were injured when the wreckage hit ground near a crowded shopping center.

Public opinion, which had been marginal at best, was now strongly against any type of airborne law enforcement because of the increasing costs and this recent tragedy. Committees were being formed in almost every city in the county in an attempt to discontinue all law enforcement helicopter programs. Some of this might have been avoided had law enforcement not relied so heavily on seized monies, avoiding other possible sources of revenue.

The crash investigation determined that the cause was pilot error, and revealed that both pilots were behind on their required training. In fact, neither pilot had been receiving any additional training for several years. This was not unusual. Over the past several years, all county-wide helicopter pilots have been falling farther behind in training. Monies simply were not available and training helicopters had been sold to keep the patrol helicopters flying.

What makes this tragedy ironic is that a national training center was about to come on line to aid local HLE. This helicopter training center will be funded entirely by private industry, allowing all aero units to have their personnel trained for free. This will allow aero units to spend the monies elsewhere in

equipment and service and still have adequate training.

Now there were no helicopters to help patrol the tremendous beach problem. Response time from ground units to the scenes of crimes was lengthy and officers had no way of being able to see what was happening in the large crowds. This might have been avoided if five years ago law enforcement had prepared for these types of problems by developing strategies and working toward a more desirable future.

Summary

In summarizing, this section is a glimpse of what might be in store for helicopters in law enforcement in the future. Technology will be increasing, training will continue to be important, and cost will be an issue that could determine the fate of helicopters in law enforcement. The military could prove to be a valuable tool in assisting law enforcement aero units.

There are many trends and events that will have important effects on law enforcement aero units, some positively and some not. Much will depend on which events come to pass and which existing trends will have more impact than others.

The research reveals that the need for helicopters in law enforcement will continue to exist, and will probably increase. The cost for helicopters will also increase, creating the need for strategies to seek alternative methods of financing aero units.

Training will continue to be mandatory and new methods of training will have to be explored. New contacts, such as the military, need to be examined. Safety will be an important issue

and any new ideas that can increase safety must be utilized.

There will be new missions for aero units, creating new and varied training. Pilots will be able to expand their expertise and further the capabilities of airborne law enforcement.

All of these possibilities will be predicated on the ability of law enforcement to develop strategic plans to help guide it into the desired state of the future. The next section deals with the development of strategic plans.

Part Three

STRATEGIC MANAGEMENT

A plan for the future use of airborne law enforcement for California cities in general, and the County of Orange in particular.

Situation Assessment

Assessing the situation in which the proposed change will occur is an important first step for the planning process.

This study dealt with airborne law enforcement for the County of Orange. In a prior study, a plan for the consolidation of airborne law enforcement was submitted and approved. The present study is based on this consolidation for the County of Orange. The focus here is the normative scenario, as described in part one.

Weaknesses, Opportunities, Threats, Strengths; Underlying Planning Analysis (WOTS UP). The analysis examines external environmental trends and internal organizational capabilities. This analysis was completed by myself and three police captains from Orange County agencies, each either with prior aero unit experience or currently commanding an aero unit.

Opportunities and Threats. An "opportunity" is a situation which is favorable to the proposal. A "threat" is a situation which is unfavorable. Both of these are environmental trends and conditions and are listed in Table #4.

Table #4

OPPORTUNITIES AND THREATS

Airborne Law Enforcement

<u>Opportunities</u>	<u>Threats</u>
Public Expectations	Cost
Increasing Crime Rate	FAA Rules
Military Assistance	Public Fear
Technology	Air Space
Increasing Population	Aircraft Noise
Need for Security	Mid-East Crisis
Increasing Gang Problems	Revenue
Redevelopment	Privacy

Opportunities.

Public Expectations. The public expects high performance from law enforcement in Orange County. This expectation forces law enforcement to continuously strive for ways to improve service to the community. Helicopters continue to be one method of better serving the public.

Crime Rate. The crime rate in Orange County continues to climb. Law enforcement needs to stay ahead of the rise in crime by using every method available to fight crime. Helicopters are a major part of this fight.

Military. The military has been using helicopters longer than law enforcement. They are farther ahead in training and innovative applications. Their experience and surplus equipment can be

available to law enforcement.

Technology. Advancing high technology continues to offer law enforcement better helicopter equipment and methods of fighting crime.

Increasing Population. With the tremendous increase in population in Orange County, helicopters continue to be able to respond to emergencies faster than any other mode of transportation in law enforcement, and are better able to patrol the increasing population.

Need for Security. Orange County residents have expressed the need for increased security to be on top of their list of importance. Helicopters continue to help satisfy that need.

Increasing Gang Problems. Gang problems continue to increase all over Orange County. This tremendous growth in such violent criminal behavior greatly helps justify the need for helicopters to fight this problem.

Redevelopment. With the increase in population comes tremendous development throughout the county. This continues to cause traffic problems and escalating crime. The ability of helicopters to fight this problem is well documented.

Threats.

Cost. The cost of aero units continues to climb. This increase in monies continues to hamper law enforcement in its ability to justify helicopter utilization.

FAA Rules. Rules governing the use of air space and helipads continue to become more restrictive. These federal restrictions can eventually greatly reduce the ability of law enforcement aero

units.

Public Fear. When the public thinks about helicopter safety the first thing that springs to mind is the thought of helicopter crashes. Several years ago, two law enforcement helicopters crashed in Orange County causing several deaths. Several months ago, two law enforcement helicopters crashed near the Long Beach airport, resulting in injury to several persons.

Air Space. There are more helicopters per capita in general use within Orange County than anywhere else in the United States. This causes greater congestion in the air space over the county, and thus greater danger.

Aircraft Noise. Noise pollution continues to irritate Orange County residents, and helicopters are a part of that problem.

Mid-East Crisis. If the trouble in the Mid-east continues to accelerate, equipment and monies previously earmarked for law enforcement could be diverted away.

Revenue. Revenue for cities and counties continues to decrease with exacerbated budget problems within the public sector. New revenue sources are becoming harder and harder to find.

Privacy. Orange County residents list privacy on top of their list of priorities, right up there with security. Many see helicopters as an invasion of personal or residential privacy.

Strengths and Weaknesses. A "strength" is a resource or capability that the organization can use to help obtain its objective. A "weakness" is a limitation or defect in the organization that may hamper the attainment of its objective. These strengths and weaknesses relate to internal resources and capabilities as compared to opportunities and threats that deal with external issues. Strengths and weaknesses that relate to airborne law enforcement are listed in Table 5.

Table #5

STRENGTHS AND WEAKNESSES

Airborne Law Enforcement

Strengths

Weaknesses

Private Funds

Training Time

Safety Record

Resource Competition

Crime Fighting

Population Density

Existence of Aero Units

Limited Heliports

Training Programs

Jealousy

Past Record

Rapid Response Capability

Strengths.

Private Funds. There are monies available exclusively for aero units through private manufacturers. These monies are to help train, get equipment, and promote airborne law enforcement. Such external assistance could greatly reduce the cost to local governments.

Safety Record. Other than the previously mentioned accident, Orange County aero units have an excellent operational safety record, and are regarded as some of the best units in the state.

Crime Fighting. The ability of helicopters to fight crime is unsurpassed and well documented in Orange County. In Huntington Beach alone, the aero unit was responsible for several hundred arrests in 1989 which would not have been made without helicopter assistance.

Existence of Aero Units. Airborne law enforcement is already in place in Orange County. This eliminates the tremendous start-up costs that occur when starting from scratch.

Training Programs. The training that is now in place in Orange County is already here and justified. Time and effort that might have been needed for this can be used in other areas of law enforcement.

Past Record. In addition to the thousands of arrests Orange County aero units are responsible for, the aero units have been credited with saving many lives.

Rapid Response Capability. The ability to be first on scene more than 90% of the time has been demonstrated by Orange County aero units. This is the reason aero units are so effective in

life saving, criminal arrests, rescues, etc. No other law enforcement tool can respond in such a timely manner.

Weaknesses.

Training Time. Due to the high amount of time needed to train and retrain aero units, enforcement time is reduced and, therefore, so is effectiveness.

Resource Competition. Competition for existing monies within city and county governments continues to increase, both within the law enforcement agency and with other departments.

Population Density. As the population increases, law enforcement continues to need other tools and technology to work with increasing crowding and crime. These other needs compete with helicopters for priority.

Limited Heliports. Existing heliports are being crowded out and space for new heliports is becoming increasingly limited.

Jealousy. Law enforcement aero units are elite, resulting in jealousy from other units within the criminal justice system. This can lead to morale and efficiency problems.

INTERNAL CAPABILITY ANALYSIS. An internal capability analysis, as shown in Appendix C, shows additional organizational strengths and weaknesses relative to airborne law enforcement. This table was completed with the WOTS UP analysis.

From the analysis of Appendix C, Orange County is rated better than average or average in all but two categories. The only area that needs immediate attention is manpower, although it was noted that money will most likely become a major issue.

A capability analysis was then completed regarding Orange County's reception to change; see Appendix D. This helped determine the receptivity to change the county has regarding wider utilization of airborne law enforcement.

This capability analysis shows that top managers are seen as having the personality, skills, knowledge, and education needed for expanding the utilization of airborne law enforcement, while the organizational climate seems to be less ready for this change. The organizational culture is split and might be ready, given the correct circumstances.

STRATEGIC ASSUMPTION

Stakeholder Identification. Many groups and individuals have interests in HLE, and are therefore concerned about the direction that helicopters will take in the future. These groups and individuals are identified as "stakeholders." Within this group of stakeholders are individuals or groups who are less obvious or are unanticipated. Although not as obvious as other stakeholders, these groups or individuals can ultimately cause serious problems with program implementation. The stakeholders likely to have an interest in the future of helicopters in Orange County are as follows:

1. City and county residents
2. City councils
3. County supervisors
4. City managers and administrators
5. Police chiefs
6. Sheriff
7. Police pilots and observers
8. Police officers and sheriff deputies
9. Fire departments
10. Aviation mechanics
11. Aircraft insurance companies
12. Aircraft manufacturers
13. Airborne Law Enforcement Association

The less obvious or unanticipated groups that may cause serious problems with program implementation are:

14. Environmental groups
15. Federal Aviation Authority

Assumptions about the stakeholders. Now that the stakeholders have been identified, it is necessary to make some assumptions about the positions each might take on the issue. The assumptions made are:

1. City and county residents. Will be against any rise in cost, but will be favorable toward an increase in efficiency. They will want to feel safe and protected, yet will be concerned about rising noise pollution, privacy as it relates to airborne law enforcement, and helicopter safety.

2. City councils. They will be reluctant to approve any change which will result in an increase in cost. They will want to know where the money will come from for airborne law enforcement. They will favor an increase in efficiency, yet will be concerned over noise and privacy complaints by citizens.

3. County supervisors. Will have the same concerns as city councils.

4. City managers and administrators. They will be concerned over where monies for new programs will come from. High expense items, such as helicopters, could lose priority.

5. Police chiefs. Will be concerned over the efficiency and effectiveness of helicopter programs, as well as public support for them. They will generally favor new technology that will increase the effectiveness of law enforcement and related equipment. They will want new revenue sources for helicopter units.

6. Sheriff. Will have the same concerns as police chiefs.

7. Police pilots and observers. They will favor the increased use of helicopters. They will be concerned with safety issues. They will want to continue with and possibly increase the time spent on training. With the increased responsibility from new aero technology, they may want higher pay.

8. Police officers and sheriff deputies. They will favor the future use of helicopters as it will assist them with their performance.

9. Fire departments. They will favor the future, expanded use of helicopters, as they continue to use them in their function as firefighters.

10. Aviation mechanics. They will favor the future use of helicopters as without them they will have a hard time with employment.

11. Aviation insurance companies. Insurance companies will be concerned with training and safety issues. If new missions will be flown by helicopters, insurance companies will most likely be inclined to raise rates.

12. Aviation manufacturers. They will be most favorable to the continued use of helicopters in law enforcement. They can become a future revenue source due to their strong desire for expanded use of their products and services.

13. Airborne Law Enforcement Association. They will be strongly in favor of the continued and expanded use of helicopters in law enforcement. They can be counted on for support and for assistance with new revenue ideas and training.

14. Environmental groups. They will want assurances that the future use of helicopters will not increase noise and air pollution. This group will likely be against expanding HLE.

15. Federal Aviation Authority. The FAA will want to closely monitor the future use of all helicopters, including law enforcement's. The FAA will try to enact new laws restricting the use of all helicopters. This group will want to control HLE.

In reviewing these assumptions, it appears the only two groups that will likely be against the expanded use of helicopters in the future will be environmental groups and the FAA. Special attention will have to be given to the concerns of these two special interest groups.

With regard to airborne law enforcement all the other groups

either favor helicopters or can go either way. Cost of the aero units seems to be the most pressing issue for most of the stakeholders.

A "Strategic Assumption Surfacing Technique" (SAST) was then used to help determine how certain the previously stated assumptions are and how important the stakeholders are. See Appendix E.

The SAST shows the most important stakeholders are the chiefs, sheriff, city managers, city councils, and county supervisors. These are the stakeholders who must be dealt with first, and whose support is needed for a successful implementation. Since the assumptions regarding city councils and county supervisors are uncertain, additional effort must be made to work with these groups to eliminate this uncertainty. This should include, but is not necessarily limited to, group discussions, liaison work, on site tours at individual aero units, one on one talks, and a constant exchange of information. In addition, the two stakeholders likely to be against HLE, environmental groups and the FAA, should also receive this special attention.

THE MISSION

The macro-mission for Orange County is to provide a professional, high level of airborne law enforcement service to all persons within the county. This aero 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. Its goal is to provide a safe and peaceful environment in which to work and live

by more effective airborne patrol and surveillance. In this endeavor, airborne law enforcement will work hand in hand with the citizens in this county in an effort to eliminate fear and crime.

The micro-mission relates to the futures issue within the County of Orange, related to more efficient use of helicopters to assist law enforcement with rapid, direct, continuous, and dependable aerial support. The goal is to help deter criminal activity, monitor traffic, and provide assistance to other departments as needed.

Policy Alternatives

A modified policy delphi approach was conducted by four aero unit commanders from Orange County to determine alternative policies to further HLE as seen in the normative scenario. Out of this process came ten alternatives. Each policy alternative was then rated on its feasibility and desirability. A list of these policies in rank order was then established, and are listed below.

Strategy Pros and Cons - Each of the strategies developed was examined and previously collected data was used to determine the pros and cons to further HLE.

Policy One: Formulation of a county-wide task force to actively develop and seek alternative revenue sources for airborne law enforcement in Orange County.

Pros:

- a) Brings the entire county into a team concept.
- b) A workable concept that can be put together easily.

- c) Many new contacts can be made for the county.
- d) New sources of revenue can be discovered.

Cons:

- a) Takes away man-hours from other department tasks.
- b) Could cause jealousy from other units, departments.
- c) Could lose budget monies, if outside revenue relied on too heavily by county.

Policy Two: Have county police chiefs and sheriff association actively pursue and support nationwide helicopter pilot training facility, to be funded by private manufacturers.

Pros:

- a) Improve training concept.
- b) Work more closely with manufacturers.
- c) Free up revenue for other uses.
- d) Gain public support.

Cons:

- a) Getting involved in a major, time-consuming undertaking.
- b) Takes chiefs and sheriff association away from other tasks.

Policy Three: Educate residents with the necessity, purpose, and capabilities of aero units.

Pros:

- a) Gets public involved.
- b) Gains public support.
- c) Gain feedback and new ideas.

Cons:

- a) A broad, time-consuming, major undertaking.
- b) Hard to sell to traditionalists.

Policy Four: Prepare a plan to sell continued HLE to city managers, city councils, and county board of supervisors.

Pros:

- a) Gain support from local government.
- b) A workable concept.

Cons:

- a) Public does not get involved here.
- b) Could cause conflict with other departments.

Policy Five:

Develop and maintain liaison with local military helicopter bases.

Pros:

- a) Develop new contacts.
- b) Develop new training concepts.

Cons:

- a) Time consuming.
- b) Could be hard to sell to local government.

Policy Six: Conduct audit of current airborne units to develop proper priorities and expenditure of monies.

Pros:

- a) A workable concept.
- b) Necessary for efficient continuation of unit.

Cons:

- a) Could cause conflict within unit.
- b) Time consuming.

Policy Seven: Assure current airborne units are aware of and actively support mission statement.

Pros:

- a) Everyone gets involved.
- b) Develops unity, increases morale, maintains purpose.

Cons:

- a) Could take time.

Policy Eight: Pursue innovative approaches to work with local environmental groups.

Pros:

- a) Gain support from environmental groups.
- b) Develop new contacts from the public sector.
- c) Help the environment.

Cons:

- a) Too broad a concept.
- b) Not traditional, hard to sell item.
- c) Takes time away from other police functions.

Policy Nine: Develop liaison with and educate FAA with regard to the needs and capabilities of HLE in Orange County.

Pros:

- a) Develop closer working relationship with government.
- b) Gain understanding of FAA needs and capabilities.
- c) Help develop better and safer guidelines for helicopters.

Policy Ten: Actively support and work with the Airborne Law Enforcement Association.

Pros:

- a) Develop new contacts.
- b) Constantly be aware of new ideas, concepts for HLE.

Cons:

a) Cost time and money.

Recommended Strategy:

There are four forces that eventually will control the destiny of airborne law enforcement. They are cost, efficiency, training, and need. Since each one of the policy alternatives deals in one way or another with these four areas, the final recommended strategy will need to be an amalgamation of all the alternatives.

A county-wide task force will need to be assembled. This task force will answer directly to the police chiefs and sheriff association. The airborne law enforcement task force will be responsible for monitoring the four areas of concern, i.e. cost, efficiency, training, and need.

Alternative revenue sources will have to be studied and applied to HLE in Orange County. This will be a continuing process that is to be monitored constantly.

The nationwide helicopter pilot training center concept must be supported.

A comprehensive plan for the future of HLE in Orange County must be drawn up and used as a model to be presented to local government agencies, such as city councils and county supervisors. This plan must not only show the many opportunities, but must also show what could happen if expanded HLE in the future is not realized. This plan should also be used in conjunction with the education of local residents, environmental groups, and the FAA.

A total commitment must be maintained by current HLE, includ-

ing audits for efficiency and understanding of the mission statement.

Liaison must be developed and maintained with local military helicopter bases. This will help enable HLE in Orange County to keep on the leading edge of technology and training.

Strategy Implementation.

To successfully implement the strategy, action steps, time lines, and resource requirements need to be developed.

Action Steps:

1. Development of county-wide task force to monitor the strategy implementation, ensure each action step is being handled, and to report to the police chiefs and sheriff association as to the progress of the strategy implementation.

2. Development of plan to sell future HLE to local government officials.

3. HLE information programs for the police chiefs and sheriff association to actively support the nationwide helicopter pilot training program concept. Commitment of manpower and money must be encouraged.

4. Liaisons must be formed with local residents, local military helicopter bases, local environmental groups, and the FAA.

5. Audit of current HLE in Orange County.

6. Development of mission statement for HLE within Orange County.

Time Line:

Liaison committees to work with the military, local residents, environmental groups, and the FAA should be formed immediately. Information and intelligence from these committees can be constantly disseminated and used toward other goals. At the same time, steps to gain support from these groups can begin immediately.

Planning stages for the county-wide task force can begin immediately. The police chiefs and sheriff association, which is already in existence, can start plans for the task force.

Once completed, the task force can assume control over existing committees, such as the liaison committees.

Resource Requirements:

1. The commitment of "champions" willing to promote the future use of HLE in Orange County and serve as committee members will be required.
2. Support from local law enforcement will be needed.
3. Financial support will be required for implementation of some of the action steps; therefore, support from local government is essential.
4. Consultants may be employed to help draw up the plan to be presented to local government.
5. Helicopter manufacturers can be called upon to help support the public relations effort.

Summary

The groundwork has now been laid for the next phase, transition management.

A situation assessment has shown that, although there are weaknesses and threats, many opportunities and strengths exist to support the proposal to further HLE in Orange County. A capability analysis shows that Orange County is better than average and can handle the change toward more effective and efficient HLE.

It has been shown that most stakeholders will support the future use of helicopters in law enforcement, or can be swayed in that direction. Cost will be the single most important factor in determining which direction HLE takes in the future, and there are avenues available to offset this problem.

A mission statement was developed for the organization and for HLE, allowing for unity and purpose.

Policies were developed and rated. From these came a recommended strategy, using resources from the entire county to bring about a change to better airborne law enforcement in the future.

Action steps, time lines, and resource requirements were identified to plan for the transition and development of expanded HLE for the future.

In transition management, further analysis of the critical players and their readiness and commitment for change will be conducted. A management structure will be identified and the transition put in place.

Part Four

TRANSITION MANAGEMENT

This section presents a transition plan from the current use of helicopters in law enforcement to a more effective one based upon the optimum use of funding, technology, training, and public mandates. It is based upon findings of the first three parts of this study for Orange County, California.

The "transition state" is unlike the present or the future. It is a unique condition with a specific time duration and characterized by certain organizational dynamics. Transition management is that group of activities and skills that are needed to effectively manage planned change.

In part two, a desirable future was described for airborne law enforcement within Orange County, California. In this anticipated future, helicopter law enforcement (HLE) continues to grow, becoming more effective, efficient, and able to serve not only law enforcement, but the community as well. In part three, the environment in which the change is to take place was assessed, stakeholders and assumptions were identified, and alternative strategies were developed to reach the desired state. Now, in part four, the focus will be on developing a plan to manage the transition from the current state of conditions to the desired state or recommended conditions.

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.⁷ It also includes persons against alteration of the status quo, namely those whose active resistance or opposition can prevent the change from happening. 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 Planning

Once the critical mass has been identified, it is necessary to determine their commitment to the proposed change. This is most easily accomplished with the use of the Commitment Chart, as described in Table 9.

Table 9
COMMITMENT CHART

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

Influencing The Critical Mass

As can be seen from Table 9, five of the seven critical mass players need to be moved to assure successful completion of the change. Those who need to be moved to be influenced in favor of the greater use of HLE will require patience and persistence.⁸ Within Orange County, California, the situation with the critical mass was ascertained as follows:

Police Chiefs/Sheriff - Although they are currently prepared to help this desired change to happen, they must become champions for HLE. A case for investment in the proposed changes should be developed which convinces chiefs/sheriff that their respective departments can only benefit from this change. Further, they must understand that even beyond their current departments, law enforcement in general needs to take advantage of leading-edge aero technology or fall behind.

To accomplish this, the proposed changes need to get on the agenda of the police chiefs and sheriff association. Once this has occurred, a complete feasibility study of the proposed change and an explanation of what may occur if no change is implemented must be presented to the chiefs/sheriff. Patience and persistence will be the key here. In turn, this plan should also be distributed to other key stakeholders like the following:

City Councils/County Supervisors - As long as the councils and supervisors within Orange County are willing to let HLE change, there will be no problem. Once the chiefs, sheriff, and city managers have been convinced, the councils/supervisors will likely endorse the plan for greater use of airborne law enforce-

ment.

City Managers - Once the chiefs/sheriff have been influenced and are committed to the proposed change, it should also be easier to increase the commitment of the city managers. The feasibility study that was presented and endorsed by the chiefs/sheriff should also be presented to the city managers. It is vital to point out to this particular group the risks of not promoting this change. The potential revenue sources and the public input that are part of the recommended strategy should be emphasized. These are needs for the city managers, and without needs, there would be no reason to negotiate.⁹

Pilots/Observers - Pilots/observers will naturally be in favor of this change. Their energy and enthusiasm will be needed, but they are not in the position to make this change for greater airborne law enforcement happen. Together, they might informally "lobby" for the changes with the chiefs/sheriff. The pilots/observers need to become driving forces for the changes proposed. In this regard they can use their expertise to help with information gathering for the feasibility study. They can also assist with questions/answers if need be. The pilots/observers are the experts; they will have much needed information to disseminate on the plan.

To accomplish this, individual aero units need to be visited, and the proposal discussed. Suggestions, information, statistics, etc. can be gathered at this time for the feasibility study. Those pilots/observers willing to assist further can then be contacted when and if the need arises. They can assist in the preparation of public information kits.

Residents - The residents could be as critical as the chiefs/sheriff. As they are currently in a position to allow the proposed change in HLE, it would be beneficial for HLE to influence residents so they would be in a position to help the change.

Public information kits, developed by the pilots/observers and the chiefs/sheriff, should be distributed throughout the County of Orange. A plan to educate the residents through the media, meetings, and public presentations should also be used. The support of the media is critical to influencing public information.

Management Structure

Once the critical mass has been identified, and those in the critical mass have been influenced to allow the recommended strategy to work, it becomes necessary to select the person or group to champion the project. In this study, the Orange County police chiefs and sheriff association has been selected as the transition manager of this strategy. The case for investment in the change must first be adopted by them before presentation to the other stakeholders.

The transition manager should have the authority to obtain necessary resources, possess the respect of the involved parties, and have effective interpersonal skills. The chiefs of police and sheriff association has these necessary skills. They have the authority to create the necessary tasks forces, liaison teams, etc. needed to complete this change.

Once the management structure has been determined, all other parties involved should be made aware of its existence and how it

will function.

The transition manager must then determine what activities will be necessary to complete the transition phase of the change. The activities that need to be completed during this phase are:

1. Formation of county wide task force to assist the transition manager in day to day activities, and to keep the transition manager constantly informed as to the progress of the transition. This task force should also scan new technologies, sources of revenue, and conduct liaison with the military.
2. Development of feasibility plan for HLE in Orange County.
3. Develop a financial plan for implementing the proposed HLE changes.
4. Create feedback and monitoring system for all dealings with the new HLE changes.
5. Update current training and make plans for expanded future training.
6. Conduct an audit of current aero units.
7. Prepare a public information package on the HLE proposals for distribution to media and key county organizations.

To make sure that these activities are performed, the transition manager can use a responsibility chart. This allows all the actors in the change to see who is responsible for what activities, who will support, etc. Once this is accomplished, all persons involved should meet to discuss this responsibility chart. Changes can then be made, until each actor is satisfied and everyone understands who is responsible for which activities.

The following responsibility chart (RASI), Table 10, shows this:

Table 10

RESPONSIBILITY CHART						
ACTIONS	ACTORS	Chiefs and Sheriff	Councils and Supervisors	City Managers	Pilots and Observers	Task Force
Formation of Task Force		R	I	A		
Development of Feasibility Plan		S	I	I	S	R
Development of Finance Plan		S	A	S		R
Feedback and Monitoring System		S	I	I		R
Training		I			R	A
Audit of Current Aero Units		S			S	R
Prepare Public Info. Package		A			S	R
R - Responsibility A - Approval (Right to Veto) S - Support (Put Resources Toward) I - Inform (To Be Consulted)						

Assuming that the ground work has been done, the recommended strategy has been established, the critical mass has been identified, the project manager has been named, and all the action steps have been determined. Yet, there are some intangible areas that should be addressed that do not fall into a well defined category:

Communicating a vision of the future: Everyone involved in this project should be able to "envision" what this future is going to look like. It should be talked about and refined until everyone is seeing the same basic future. Then share this vision with others who are not part of the change. The public information program should emphasize the positive outcomes of greater HLE, while eliminating the element of fear.

Information exchange: Information will be constantly coming in as the transition begins. It is important to exchange this information, both with those working on the change and those not directly involved, such as the public in general. An open policy on HLE communication is recommended.

Help people let go of the old: It can be difficult for people to let go of the old, because it is familiar and comfortable. It can only benefit the department to assist those people comfortable with law enforcement status quo to transition to more modern technology, like HLE. Without help, these people may never fully join the change, and could, in the end, damage the transition by their resistance.

Celebration ceremonies: Special events at key points along the HLE transition will assist people in breaking old ties, and, at the same time, will reward those working toward implementation. The creation of new mottoes, logos, and rituals now, will become important symbols in the future. Rewards such as "HLE Pilot of the Year" and "HLE Observer of the Year" (chosen by the chiefs/sheriff association) will help with the transition.

Relate to other changes: The organization should exercise caution when considering implementing other changes at the same time as the transition to greater HLE. When possible, other changes should be postponed until the transition phase is completed, or these other changes should be integrated with HLE.

Remain visible: The project manager should always be visible and available. This is critical to the manager's role in advanc-

ing HLE. The manager must be ready to help others to assure all responsibilities and time lines are met. The project manager must model the values of the changing organization.

Short-range checkpoints: Periodic checkpoints along the way will help determine progress, or lack of, throughout the transition phase toward greater airborne law enforcement. These checkpoints can be the clue to the manager to determine if slight changes need to be made, and can also be used to determine appropriate times for celebrations.

Summary

In part four, the critical mass was identified, those persons who will be responsible for bringing about the future of helicopters in law enforcement. Their level of commitment was assessed and what needed to be accomplished to move individual actors to the needed commitments.

The principal champion of the project, the transition manager, was identified. The characteristics needed to be a manager were listed. Action steps to complete the transition were examined and listed. A responsibility chart was used to determine who would be responsible for each action item, and who would be supporting them. Finally, items that did not fit a specific category were listed, to assist in implementing the transition.

CONCLUSIONS, RECOMMENDATIONS, AND FUTURE IMPLICATIONS

This study focuses around the question "What will be the future of helicopters in law enforcement by the year 1995?" As seen in the scenarios of part one, there are three possible futures: we can do nothing and helicopters will continue status quo, slowly being reduced due to budget restraints; helicopters can be eliminated from law enforcement quickly, with a combination of certain events and budget problems; or helicopters can expand within law enforcement, becoming more effective and efficient.

In Orange County, California, the use of helicopters is likely to expand, while in other areas of the state, helicopter units may slowly be reduced. Some areas in the state that do not have current helicopter programs will never get one, while others will initiate new helicopter law enforcement (HLE) programs. The difference will be desire, local need, and leadership in utilization of airborne technology.

This issue is directly affected by the sub-issues listed in the beginning of this study. Each sub-issue can now be answered.

How will changing public mandates regarding cost, safety, noise, etc., affect HLE? Public mandates will have a large affect on the future of HLE. A desired future will need the support of the residents of the community. New technologies that reduce noise, increase safety, and help reduce cost must be utilized, at the same time the public should be educated on HLE. Public information kits need to be distributed to inform the public

about HLE programs, including information regarding, noise, safety, cost, etc. The public is becoming increasingly concerned over the expenditure of public monies, and therefore information on cost saving concepts and revenue sources should be shared with the public. Public information kits that contain this information should be periodically updated and disseminated. In addition to these kits, HLE should conduct open houses of aero units to the public, be involved in public speaking engagements, and become involved in local civic groups. All this information should be shared with local media to foster an air of cooperation and understanding with the media.

How will advances in helicopter technology within the next five years affect HLE? Technology is creating faster, lighter, quieter, and more powerful helicopters that will also be more comfortable. This will allow helicopters to be more efficient than ever before. Technological advancements in surveillance equipment will allow pilots/observers to see more, from greater distances, allowing for better and safer surveillances.

What training innovations will be utilized by HLE in the next five years? Training will continue to be an important issue to the future of HLE in Orange County, California. During the writing of this study, two law enforcement helicopters crashed in Los Angeles County. This accident may have been avoided by new and better training. Two areas that should be utilized by HLE in the future are the military, and a national training center. The Department of Defense is innovative in the use of new technology and training. HLE in Orange County should take advantage of this

military information and insight, as well as benefit from acquisition of surplus equipment.

In addition, HLE in Orange County should continue with efforts to bring the national law enforcement helicopter training center to reality. The benefits from this type of training would be tremendous. Pilots from across the nation would be trained in the same manner, thinking alike, and for less cost to law enforcement.

As the missions for airborne law enforcement in Orange County increases, and as technology continues to develop, pilots and observers will need to be trained on new equipment and procedures. As air space over Orange County becomes more crowded, and FAA restrictions tighten, pilots and observers will need additional training in safety aspects. Tomorrow's law enforcement officer will have to be a true professional.¹⁰ This will be even more true for HLE officers.

What financial changes will occur that will make HLE more or less available? This will be the most important area for HLE in Orange County, California. In addition to budgeted resources, HLE must develop and utilize new revenue sources, such as a federal trust fund for HLE, the national training center, local seizure monies, federal and state grants, and assistance from private helicopter manufacturers. Also, surplus military equipment can become available, and that avenue must be pursued.

The current aero units in Orange County should be audited to assure all excess expenditures have been eliminated and that all units are functioning as efficiently as possible.

HLE will be able to expand into areas that will make it an

absolute necessity in the future. They will be able to respond to emergency scenes within seconds. Injured citizens can be lifted to emergency facilities within minutes. Although some helicopters have the ability to accomplish this now, most law enforcement agencies do not have the equipment, training, money, or technology to do these tasks.

Rescue work with fire departments, SWAT teams, lifeguards, and other agencies are being done sporadically, but can be accomplished as routine missions with proper planning, training, equipment, and leadership.

Within Orange County, California, those agencies that have HLE, and those that desire to start HLE, will find it necessary to become innovative in the areas of revenue, training, public education (regarding aero units), and technology. This study offers some ideas of what may be expected for HLE in the future, and offers an approach on how to make the most of advancing helicopter technology for more effective law enforcement.

Future Research

HLE is a complicated field. There are several areas that the writer discovered in this research that deserve further study. The constraints of time and the intended limit of this study did not allow the writer to dwell on these areas.

The first area is the national helicopter pilot training center concept. This is a training center to be used by any airborne law enforcement unit in the United States. The center would train an officer to be a helicopter pilot at no expense to the department. The center would be equipped with all the helicopters currently used in law enforcement, and the agency requesting the training could choose what type of helicopter they wanted their pilot trained in. The location of the training site, which has not been determined at the time of this writing, would be situated to be near mountains, ocean, cities, and desert, allowing for training in all environments. Funding for this center is to be paid entirely by private manufacturers.

The current cost of training someone to be a licensed commercial pilot today is in excess of \$10,000.00, and is increasing. The money alone that could be saved by the use of this type of training facility would make the program worthwhile, not to mention the extensive training that could be realized, resulting in increased safety.

Another area that deserves future research, is the technology that will become reality in the next five years. 3-axis auto pilot systems, emergency rescue equipment, surveillance equipment, better helicopters, etc. can all greatly increase the capabilities of HLE. Much can be done if law enforcement would

work with manufacturers in the design stages of this equipment.

The final area to be discussed is the military. The writer spent many hours visiting military helicopter bases in Orange County. The military was very open and candid in discussing their training, equipment, personnel etc. with the writer. Much can be gained for law enforcement if they would work more closely with the military. New training philosophies, access to trained pilots, use of equipment (such as training simulators), and bases on which to train are but some of the areas that could be opened up to law enforcement, if the initiative was to be taken. As a result of the author's recent exposure to the military, pilots from the Huntington Beach Police Department have been attending training put on by the military.

In conclusion, the potential of helicopter use for law enforcement in the future will be limited only by desire and imagination. It is hoped that other researchers will conduct further study in those areas mentioned above, and that law enforcement executives, now and in the future, will also realize the great potential of HLE, using the ideas presented in this study to further the use of helicopters in law enforcement.

ENDNOTES

1. Robert Morrison: Huntington Beach Police Department, Aero Unit History, 1989, p.3.
2. Robert Morrison: Huntington Beach Police Department, Aero Unit History, 1989, p. 4.
3. Patricia Rickey: "R&WI Exclusive Survey: Public Service Aircraft", Rotor & Wing, July 1990, p. 32.
4. Patricia Rickey: "R&WI Exclusive Survey: Public Service Aircraft", Rotor & Wing, July 1990, p. 32.
5. The Kiplinger California Letter, May 24, 1990.
6. Orange Coast Daily Pilot, August 16, 1990, p. A9.
7. Richard Beckhard and Reuben T. Harris: Organizational Transitions; Managing Complex Change, Editors: Edgar H. Schein, Richard Beckhard; Addison-Wesley Series, 2nd Edition, (Menlo Park, CA; Addison-Wesley Publishing Co, 1987).
8. Kenneth Blanchard and Norman Vincent Peale: The Power of Ethical Management, 1988, p. 62.
9. Gerard I. Nierenberg: The Art of Negotiating, 1984, p. 109.
10. James R. Metts: "The Police Force of Tomorrow", Careers Tomorrow, 1988. p. 71.

BIBLIOGRAPHY

Airbeat, Journal of the Airborne Law Enforcement Association,
Vol. 25, Nov-Dec, 1986.

Airbeat, Journal of the Airborne Law Enforcement Association,
Vol. 53, Conference, 1990

Blanchard, Kenneth, and Peale, Norman Vincent, The Power of Ethical Management, Ballantine Books, 1988.

FM - 2030, Are You a Transhuman?, Warner Books, Inc., 1989.

Rotor, Spring, 1990.

The Kiplinger California Letter, July 26, 1990.

The Kiplinger California Letter, August 23, 1990.

APPENDIX A

Persons Interviewed

Major Regis R. Raffensberger
Baltimore Police Department
601 E. Fayette St.
Baltimore, MD 21202

Chief Hank Hayes
U. S. Border Patrol
9-C Butterfield Trail
El Paso, TX 79906

Dep. Chief John Rob
Fairfax County Police Department
4606 West Ox Road
Fairfax, VA 22030

Chief Pilot Pete Gillies
Western Helicopters, Inc.
P.O. Box 579
Rialto, CA 92376

John J. Justen
Supervisor, Applications
Commercial Business Operations
Bell Helicopter Textron Inc.
P.O. Box 482
Fort Worth, TX 76101

Donald L. Bachali
Manager, Southwest Region Marketing
McDonnell Douglas Helicopter Company
5000 East McDowell Road
Mesa, AZ 85205-9797

Frank L. Jensen, Jr., President
Helicopter Association International
1619 Duke Street
Alexandria, VA 22314-3439

Bobbie E. Tucker, President
Airborne Law Enforcement Association
555 Ramirez Street
Los Angeles, CA 90012

APPENDIX A (cont)

Marine Combat Crew Readiness Training Group 10
United States Marine Corps
Marine Helicopter Training Squadron 301
3d Marine Aircraft Wing, FMFPac
MCAS, Tustin, CA 92710-6062

Bob France
Aviation Safety Inspector
Federal Aviation Administration
Flight Standards District Office #65
Federal Facilities Office Building
Cleveland Hopkins Int'l Airport
Cleveland, OH 44135

Robert P. Juranek
ATC Chief
Los Alamitos Air Traffic Control Facility
Los Alamitos, CA 90720-5001

Captain David L. Brooks
Costa Mesa Police Department
99 Fair Drive
Costa Mesa, CA 92626

Captain Merle Schneblin
Huntington Beach Police Department
2000 Main Street
Huntington Beach, CA 92648

Appendix B

NGT Panel

Chief Ronald E. Lowenberg
Huntington Beach Police Department
2000 Main Street
Huntington Beach, CA 92648

Chief Daryl Wicker
Cypress Police Department
5275 Orange Avenue
Cypress, CA 90630

Peter Green
City Councilman
City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

Rich Barnard
Deputy City Administrator
City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

Captain Donald L. Jenkins
Huntington Beach Police Department
2000 Main Street
Huntington Beach, CA 92648

Lieutenant William Mamelli
Huntington Beach Police Department
2000 Main Street
Huntington Beach, CA 92648

Wayne Lee
Accounting Officer
City of Huntington Beach
2000 Main Street
Huntington Beach, CA 92648

APPENDIX C

Capability Analysis - Strategic Needs

STRATEGIC NEED AREA: FOR AIRBORNE LAW ENFORCEMENT IN ORANGE COUNTY

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

APPENDIX D

CAPABILITY ANALYSIS

RATING TWO

STRATEGIC NEED AREA: FOR AIRBORNE LAW ENFORCEMENT IN ORANGE COUNTY

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	___	___	___	X	___
Skills/Talents	___	___	___	X	___
Knowledge/Education	___	___	___	X	___
ORGANIZATIONAL CLIMATE:					
Culture/Norms	___	___	X	___	___
Rewards/Incentives	___	___	X	___	___
Power Structure	___	___	X	___	___
ORGANIZATION COMPETENCE:					
Structure	___	___	X	___	___
Resources	___	___	___	X	___
Middle Management	___	___	___	X	___
Line Personnel	___	___	X	___	___

APPENDIX E

STRATEGIC ASSUMPTION SURFACING TECHNIQUE (SAST)

CERTAIN

- | | |
|------------------|----------------------|
| 10. (Mechanics) | 15. (ALEA) |
| 13. (Mfgrs.) | 7. (Pilots/Obs.) |
| 8. (Off's/Dep's) | 5. (Chiefs) |
| | 6. (Sheriff) |
| 9. (Fire) | 1. (Residents) |
| | 4. (City Mgrs.) |
| | 12. (Ins. Companies) |

UNIMPORTANT

IMPORTANT

- | |
|-----------------------|
| 14. (FAA) |
| 2. (City Councils) |
| 3. (County Supr) |
| 11. (Environ. Groups) |

UNCERTAIN