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SUMMARY OF ASAP RESULTS FOR APPLICAT ON TO STATE AND LOCAL PROGRAMS Volume II-ASAP Costs

Contract No. DOT-HS-5-01150 August 1976 Final Report

PREPARED FOR:

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U.S. DEPARTMENT OF TRANSPORTATION National Highway Traffic Safety Administration Washington ,D.C. 20590

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I. INTRODUCTION

A. Background

During the early 1970's, the National Highway Traffic Safety Administration funded thirtyfive experimental demonstration Alcohol Safety Action Projects (ASAPs) throughout all areas of the United States. The principal objectives of the Alcohol Safety Action Program were to:

- Demonstrate the feasibility and practicability of a systems approach for dealing with the drinking-driving problem and, further, to demonstrate that this approach can save lives.
- Catalyze each state into action to improve its safety program in the area of alcohol safety.

The ASAP did demonstrate that a coordinated and integrated systems approach is feasible and practical in producing a health care delivery system, one in which the functional alcoholic can be identified as a problem drinker-driver and efficiently processed through the court system into a rehabilitation program. However, the ASAP did not demonstrate that its system approach could produce an immediate and dramatic reduction in alcohol-related highway deaths (Volume I-Appendix B).

The positive findings have had significant effect in catalyzing states to improve their safety program in the area of alcohol safety (Volume I-Appendix A). However, the somewhat negative "bottom-line" results have not been conducive to wide scale implementation of ASAPs.

If the demonstration projects funded by the Federal Government had achieved an immediate and significant reduction in fatalities and injuries caused by the abusive drinking driver, states and local governments would have been inclined to invest their financial resources into a proliferation of ASAPs throughout the country. However, since the ASAP experience did not achieve an immediate "bottom-line" objective, state and local governments can legitimately question the cost-effectiveness of such use of their limited resources. It seems clear that the elimination of the "stubborn residue" will require a concerted and very long-term effort by highway safety specialists, enforcement agencies, the criminal justice system, and the health care delivery system. A basic question, then, is whether or not the ASAP systems concept is a viable approach from a financial standpoint.

B. ASAP Cost Analysis

This analysis developed answers to that basic question. Financial data were collected from a sample of ten of the thirty-five Alcohol Safety Action Projects; the sample included state, county,

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SITES INCLUDED IN COST ANALYSIS

ASAP Location	ASAP Type		
New Hampshire	State		
South Dakota	State		
Fairfax	County		
Hennepin	County		
Phoenix	County		
Tampa	County		
Kansas City	City		
New Orleans	City		
Oklahoma City	City		
San Antonio	City		

and city projects. Data were developed for the actual projects funded by NHTSA, and were estimated for an assumed condition of local implementation and funding. The primary objective of the research was to determine the potential of ASAPs for financial self-sufficiency. In simple terms, it was assumed that, if ASAP programs were to be implemented locally on a wide scale over long periods of time, it was an absolute necessity that they be cost-effective- that they have the capability for operation at no long-term cost to state or local governments.

Details of the methodology and a summary of financial data are presented in Appendix A, while the results of this analysis are described in the following sections of this report. They document that a comprehensive alcohol countermeasures program can be designed and implemented at minimal cost to a community. ASAP is not a social program which requires a large investment of the general taxpayer's money.

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A. Introduction

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This portion of the report documents overall costs and revenues for the ten ASAP sites included in the research. It includes an analysis both for the actual projects funded by NHTSA and for similar projects hypothesized to have been funded by local or state governments. The primary focus is on the economic impact on four government sectors:

- Federal Government
- State Government

- County Government
- City Government

The costs and revenues for each government sector, together with the financial data for offenders and attorneys, are summarized for each site. This approach permits comparison of the government sector which bore the cost and/or which received the revenue. Net costs (or revenues) are shown for the three local sectors (state, county, and city) and for all sectors (NHTSA, state, county, and city). More complete cost and revenue data are presented in Appendix B, both for the actual (NHTSA funded) and the hypothesized (locally funded) programs.

TABLE 1. STATE ASAP REVENUES AND COSTS (1971-1974) (Thousands of Dollars)

Sector	Actual NHTSA Funded			Hypothesized Locally Funded			
	Revenues	Costs	Net	Revenues	Costs	Net	
	New Hampshire ASAP						
NETSA		(1385)	(1385)				
Total Local	2366	(479)	1887	2366	(247)	2119	
State	2366	(416)	1950	2366	(247)	2119	
County			-				
City		(63)	(63)	-			
All	-		[
Government	2366	(1864)	502				
Offenders			(3136)			(3136)	
Attorneys			1135			1135	
		South Da	kota AS/	112			
NHTSA		(1832)	(1832)				
Total Local	1764	(747)	1017	1764	(2113)	(349)	
State	110	(488)	(378)	110	(1452)	(1342)	
County	806	(166)	640	806	(166)	640	
City	848	(93)	755	848	(495)	353	
All							
Government	1764	(2579)	(815)				
Offenders			(2504)			(2504)	
Attorneys			1135			1135	

Overall conclusions on the extent to which an Alcohol Safety Action Project can be financially self-sufficient are contained in Section II.E. An analysis of economic impact for state-wide projects, county-wide projects, and city projects is contained in Subsections B, C, and D, respectively

B. Analysis of State ASAPs

There were two state-wide Alcohol Safety Action Projects (New Hampshire and South Dakota) included in the analysis sample. Summaries of their revenues and costs are presented in Table 1.

For the actual NHTSAfunded program, the New Hampshire ASAP operated with a net revenue to state and local governments of \$1,864,000, and with a

net revenue to all governments of \$502,000. Contrasting sharply and much more typical of ASAP operation, the South Dakota ASAP had a net revenue to state and local governments of \$1,017,000, but with a net cost to all governments of \$815,000. Both projects had the problem of costs exceeding revenues for one of the nonfederal sectors.

Under the locally funded concept, cost reductions were made to eliminate the research and report requirements of a demonstration project, but no additional financial burden was placed on the offender. Under the hypothesized system, the New Hampshire ASAP would have operated with a net revenue of over \$2 million for the 3.5 years. Clearly, the New Hampshire ASAP demonstrates the capability for sustained operation at no cost to the taxpayer. The South Dakota ASAP would

TABLE 2.	COUNTY	ASAP REVENUES AND COSTS (1971-1974)
		(Thousands of Dollars)

Sector	Act	ual NHTS/ Funded	١	Hypothesized Locally Funded			
	Revenues	Costs	Net	Revenues	Costs	Net	
Fairfox ASAP							
NITTSA		(2643)	(2643)				
fotal Local	720	(377)	343		(874)	(874)	
State		(377)	(377)		(250)	(250)	
County	648	-	648		(321)	(321)	
City	72		72		(303)	(303)	
All		1					
Government	720	(3020)	(2300)				
Offenders			(1773)			(2835)	
Attorneys			327			327	
		Henney	oin ASAP				
NHTSA		(2115)	(2115)				
Total Local	2589	(981)	1608	2589	(2519)	70	
State			1		(54)	(54)	
County	65	(313)	(248)	65	(1447)	(1382)	
City	2524	(668)	1856	2524	(1018)	1506	
All Government	2589	(3096)	(507)				
Offenders			(7845)			(7845)	
Attorneys			4987			4987	
		Tamp	a ASAP				
NHTSA		(2172)	(2172)				
Total Local	560	(230)	330		(635)	(635)	
State		(216)	(216)	_	(120)	(120)	
County	115		115		(126)	(126)	
City	445	(14)	431		(389)	(389)	
All							
Government	560	(2402)	(1842)				
Offenders			(3504)			(3707)	
Attorneys			1311			1311	
Phoenix ASAP							
NITTSA		(2219)	(2219)				
Total Local	901	(1049)	(148)	36	(383)	(347)	
State	267	(173)	94	36		36	
County				-	'		
City	634	(876)	(242)	_	(383)	(383)	
All							
Government	901	(3268)	(2367)				
Offenders			(2178)			(1664)	
Attorneys			1277		l::	815	

have operated at a net cost of \$349,000 and, to be financially self-sufficient, this state would have had to shift that amount to the offender. Even then, there still would exist the problem of the state paying the majority of the costs, with the cities and counties receiving the revenue. For long-term operation, solution of this problem will require either full understanding of the ASAP systems concept or a mechanism to transfer funds from one to another governmental entity.

C. Analysis of County ASAPs

There were four countywide Alcohol Safety Action Projects (Fairfax, Hennepin, Tampa and Phoenix) included in the analysis sample. Summaries of their revenues and costs are presented in Table 2.

For the actual NHTSAfunded program, three of the four county ASAPs had net revenues to local governments during the 3.5-year period. The fourth ASAP (Phoenix) had net costs for the city, but did operate with a net revenue for the state. Interestingly, neither costs nor revenues are associated with the county in the Phoenix county-wide ASAP.

Under the locally funded hypothesis, only one of the ASAPs (Hennepin) was financially self-sufficient. For the other three ASAPs "break-even" operation could only be achieved by transferring a financial burden of \$300 to 600 thousand to the abusive drinker-driver. In terms of percentages, this is an increase of 18 to 20 percent in costs to the offender. However, as will be discussed later in the report, the typical cost for a DWI arrest is not high, at least not in terms of the cost of alcoholism.

A persistent problem shown in the data is the uneven distribution of costs and revenues among the local and state governments. In each of the four ASAPs, either the state, county, or city had to bear costs in excess of revenue.

D. Analysis of City ASAPs

There were four city Alcohol Safety Action Projects (Kansas City, New Orleans, Oklahoma City, and San Antonio) included in the analysis sample. Summaries of their revenues and costs are presented in Table 3.

During the actual NHTSAfunded 3.5 years of operation, these four city projects demonstrated clear similarities. Each project operated with a net revenue to combined state, county, and city governments. Their average cost to the National Highway Traffic Safety Administration was \$2,219 thousand, but offsetting revenues which were generated by the projects to the local governments reduced the overall cost to the taxpayer to an average of \$1,500 thousand.

Under the locally funded concept, three of the four projects would have been financially self-sufficient, two showing net revenues of over a quarter of a million dollars and the third operating essentially at "breakeven." It should be noted, however, that to achieve this

	Acti	al NITSA		Hypothesized Locally		
Sector		Funded	1	1 unded		
	Revenues	Costs	Net	Revenues	Costs	Net
		Kansas (Tuy ASA	p		
NIITSA		(2107)	(2107)			
Total Local	1152	(325)	827	251		251
State						
County						
City	1152	(325)	827	251		251
All						
Government	1152	(2432)	(1280)			
Offenders			(5357)			(5859)
Attorneys			4045			4045
		New Orle	eans -1SA	P		
NITTSA		(2157)	(2157)			
Total Local	502		502	600	(900)	(300)
State					(300)	(300)
County		-		-		
City	502		502	600	(600)	
All						
Government	502	(2157)	(1655)			
Offenders			(1934)			(2050)
Attorneys			1384			1400
		Oklahoma	i City AS	AP		
NHTSA		(2512)	(2512)			
Total Local	512	(92)	420		(19)	(19)
State		(92)	(92)	-		
County	-				-	
City	512		512		(19)	(19)
All						
Government	512	(2604)	(2092)			
Offenders			(3382)			(4382)
Attorneys			2520			2490
San Antonio ASAP						
NHTSA		(2101)	(2101)			
Total Local	1230	(98)	1132	731	(437)	294
State		(8)	(8)	67		67
County	1230		1230	664		664
City		(90)	(90)		(437)	(437)
All		(2100)				
Government	1230	(2199)	(969)			
Offenders			(4475)			(3116)
Attorneys	L		2577		(2311

.TABLE 3. CITY ASAP REVENUES AND COSTS (1971-1974) (Thousands of Dollars)

situation required in each case that the offender be assessed heavier monetary losses than actually occurred (16-percent increase). The fourth ASAP (New Orleans), which had a net cost, could

have been operated at "break-even" if the costs to the offenders had been increased by 21 percent.

It is recognized that the concepts of "revenue" and "costs to the offender" received little attention during the formative stages of the ASAP demonstration program. This lack of consideration can be attributed to three factors: (1) ASAP program administrators had little control over sources or amounts of revenues; (2) revenue generation was not directly related to expenditures, and (3) political problems were (and are) perceived in viewing enforcement/judicial functions as revenue-generating activities. However, if ASAP is going to be implemented on a wider scale by local governments, it will be just as important to plan the financial system as it will be to plan the operational system.

E. Conclusions

The most significant conclusion which can be drawn from the analysis of costs and revenues is that it is possible to implement a locally funded ASAP which is cost effective. The following statements summarize the more important observations resulting from the analysis:

- The NHTSA-funded Alcohol Safety Action Projects were expensive, averaging \$2.1 million for the 3.5 years of operation. However, this high cost is offset by the fact that in 9 out of 10 sites, the local governments (state, county, city) had net revenues from the projects. If these revenues were taken into account, the 10 Alcohol Safety Action Projects would have had an average cost of \$1.3 million.
- Substantial portions of the costs of the NHTSA-funded Alcohol Safety Action Projects were used to meet the research and reporting requirements of a federally funded demonstration project. With their elimination, it is entirely feasible to implement a State, County, or City Alcohol Safety Action Project which is financially self-sustaining.
- A financial problem, which was apparent in half of the projects included in the analysis, is the fact that in an integrated system of state, county, and city participation, revenues do not always proceed to the agency bearing the cost.

The basis for these conclusions is explored in greater depth in the next sections of this research report.

III. ANALYSIS OF ASAP COSTS

A. Introduction

This portion of the report contains a detailed analysis of ASAP costs for each of the four major countermeasures:

- Program Administration
- Enforcement

- Adjudication
- Rehabilitation

Annual operating costs were developed by averaging expenditures for the last two years of the operations of the ten ASAPs included in the analysis. Elimination of the costs for the initial year of ASAP operation was necessary because expenditures during that period were a combination of start-up and operating expenses and were not representative of annual operating costs of a stable program. Start-up costs were developed separately by an analysis of expenditures during the planning period and for equipment procurements and training which typically extended into the initial year of operations for the projects.

For each of the four major countermeasures, two separate analyses were developed: the cost experience from the NHTSA-funded ASAPs; and, areas where cost reductions were feasible, assuming that the ASAPs had been locally funded and did not have to meet the research and reporting requirements of a federally funded demonstration project.

B. Program Administration

The overall cost of program administration was developed by combining the expenditures for project management, project evaluation, and public information and education. These three functions were solely the responsibility of the management staff and all contributed to program administration.

1. Experience from NHTSA-Funded ASAPs

Average costs for performance of project administration are contained in Table 4. These costs include the funds provided by NHTSA and the local contribution, both direct and indirect. Overall, the typical project required approximately \$250,000 annually for operating expenses and just under \$100,000 initially to plan and organize the project.

Annual operating costs were almost equally divided between project management (42 percent) and project evaluation (40 percent). Public information and education accounted for the remaining expenditures (18 percent). Comparison of annual oper-

ating costs for program administration with DWI arrest rates failed to develop any correlations, indicating that the costs of the coordinative and evaluative functions are independent of the operational countermeasures.

The major expenses for project start-up were salaries for the management staff during the planning period and procurement of office equipment (46 percent), design of the research aspects of the project and collection of baseline data

TABLE 4. AVERAGE PROGRAM ADMINISTRATION COSTS

Type of ASAP	Annual Costs (thousands)	Start-Up Costs (thousands)	
State	\$217	\$68	
County	\$281	\$87	
City	\$244	\$121	

by the project evaluator (42 percent), and design of public information and education campaigns and materials (12 percent).

2. Areas for Cost Reductions

Reductions are feasible in all three of the functional areas of program administration.

• Cost Reductions in Project Management. The initial concept of a management staff for an ASAP included provisions for several countermeasure coordinators, legal or fiscal assistants, and extensive support personnel. As the projects matured, the countermeasure coordinators were shifted to their line organizations and support staffs were substantially curtailed. Most projects found it possible to manage their ASAP with only a project director, one or two professional assistants, and modest clerical support.

• Cost Reductions in Project Evaluation. Project evaluation was a federal requirement for the demonstration projects, and its scope could be drastically reduced under local funding. Some sites could eliminate entirely the costs for project evaluation, but most would find it advantageous to obtain assistance, either through temporary staff or a contract with a professional organization, for design and implementation of a management information system.

• Cost Reduction in Public Information and Education. Almost all ASAPs expended considerable amounts of time and money for internal development of mass media materials. Considering the rather limited success of public information and education campaigns and the extensive material now available from NHTSA, reductions are practical for both start-up and annual operating costs.

Based upon the recommendations from the ten ASAP sites, a program administration countermeasure can be effectively designed with average start-up costs of \$40,000 and annual operating costs of \$90,000. Local conditions will vary, depending upon the type of ASAP (state, county or city), and will vary from site to site. Start-up costs should range between \$25,000 and \$50,000, with annual operating costs varying between \$60,000 and \$120,000, depending almost exclusively on the size of the management staff.

C. Enforcement

The overall cost of enforcement was developed by combining the expenditures for enforcement administration, enforcement selective patrols, enforcement training, and special activities. No costs were attributed to the catalytic increase in regular patrol DWI arrests achieved by almost all

TABLE 5. AVERAGE ENFORCEMENT COSTS

Type ASAP	Annual Costs (thousands)	Annual Revenues (thousands)	Start-Up Costs (thousands)
State	\$312	\$125	\$49
County	\$265	\$ 35	\$80
City	\$320	\$ 55	\$77·

sites. Offsetting revenues were generated by most sites through traffic citations issued by the selective enforcement patrols.

1. Experience From NHTSA-Funded ASAPs

Average costs for performance of enforcement, together with offsetting revenues, are contained in Table 5. These costs include the funds provided by NHTSA and the local contribution, both

necessary, but that economics could have been realized by more careful screening of their equipmonitaroqurencementaroocoes ereas: wolkew worker worker for the service for the service for the the the the term expenses? Realialans13900098 preparetably and thetsetented beauseree pivelerand userand the most participant we erated \$61,000 in fines an authoritheright file issuance of a thread of the second of

Based upon the recommendations of the ten ASAP sites, an enforcement countermediation

can be effectively designed by: (1) selecting a desired level of selective enforcement activity in patrol man-hours and costing that activity in minute strol man-hours and costing that activity in minute strol man-hours and costing that activity in minute strol man-hours and costing that activity in annual operating expenses for patrol adaries; (2) of vuccession (can but crosting that activity in annual operating expenses for patrol adaries; (2) of vuccession (can but crosting that activity in annual operating expenses for patrol adaries; (2) of vuccession (can but crosting that activity in annual operating expenses for patrol adaries; (2) adding 10 percent annually, for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 28 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) providing 20 percent for administration and special activities; and (3) percent for administration and special activities; and (3) percent for administration and speci

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during their federally funded operation indicates that there is a definite correlation between the revenues ganetailed shyothase; git at ions: The maximus warwer and control by wather and show a minimus mum of zero. Revenues varied from zero to \$238,000 annually. Another factor showing wide la variation was the degree to which there was a catalytic increase in regular patrol DWI arrests over histoffel Matters ?? Fils Mane to apositive 4,609. MAN JORTAT EDATIVA . 3 ELEAT

HOURS PER DWI ARREST VERSUS TYPE OF PROJECT

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Rural

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productivity. While there has been little or no quantities and	IWA/IIN
nounce Realleage and threaded threader the according as much	at areas
as plus or minus 20 percent in DWI arrest productivity, alebs entrate	65
of the different levels of motivation on DWI arrest productivity is	13

and reports from individual ASAP sites indicate that the degree of

19 Cost Reductions in Balance here Administration. The resignation and reporting requirents of a Telecraty municipased was the tage administration stalls much larger than would be required for an actively fanded work in the conclusion of the conc

included in the sample for this research. PER DWI ARREST VERSUS

Cost Reductions in Enforcement Training. Only three of theiresteed wald woldow-up training romanein selection and the selection of the seven used roll-Unit that and found it to be an acceptable system, and one world was the cost A Degree of Motivation

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to anon of al Cost Reductions in Enforcement Spacial Activities. The restarcit reduirements or the fedenillyshindedyphojdetoreduired frequent baluataryorlandsidigisurveyse which typically were sup ported by the pollee departmental in addition, almumber of sites had special units for surveillances of suspended and revoked liconsess Nonerod at hese conits, was a considered effective endugh to warrant their retention under a locally funded tomospic be was generally concluded that special activities would be funded adequately by approximately selected and ad bluow. TABLE 8. PATROL MAN-HOURS PER DWI VERSUS SELECTIVITY OF PATROL

Cost Reductions in Enforcement Patron, Provision of the same level of DWI arrest productivity would require the same expenditure of funds whether federally or lecally funded. The costs during the period of <u>NHTSA</u> funding during and staged \$242,000, which was approximately \$9 per patrol man-hour. All sizes concluded that major reductions in the costs, gf, an orcement patrols could be made by <u>norrealsing the level of months</u> in the instellective patrol officers, by being more selective in areas and times of enforcement, or by shifting the burden of DWI arrests increasingly to the regular patrols. These three factors are discussed more fully in subsequent baragraphs.

> 1.01 9.5 11.5 8.4 7.5 City 99

Cost Reductions in Start-Up: The major expenditures for start-up were initial officer training and equipment procurement. All sites concluded that their training programs were

necessary, but that economics could have been realized by more careful screening of their equipmentiprocurements Wassand videotage white were recommended for very careful consideration with With this action of massemerally good used that start-up costs could have been sheld to \$20,000 xo which was 28 ipercent of the annual operating costs for enforgement pateols re cont at 000, 102 botters

Based upon the recommendations of the ten ASAP sites, an enforcement countermeasure can be effectively designed by: (1) selecting a desired level of selective enforcement activity in patrol man-hours and costing that activity in annual operating expenses for patrol salaries; (2) adding 10 percent annually for administration and special activities; and (3) providing 28 percent operation and special activities. annual expenses for patrol salaries as a budget for start-up costs. The output from this funding will vary depending upon the rural/urban nature of the ASAP site, the level of motivation of the officiers ment patrols (82 percent). Much smaller man

Rural/Urban Nature of Site ... Eliforeements experiencelliftom ithe gen laSAP sites it during their federally funded operation indicates that there is a definite correlation between the ty public of project band the patron man hours required for a DWI arrest. Mhile there was some wariation anishy sites, the patrol min-hours ber DWI arrest shown in Table 6 appear to be walld factors form plaining purposes and whood a finance standard a cars that bonny somewold and to man as the date of a start of an and the

TEREPHONE AND THE PARTY AND TABLE 6. AVERAGE PATROL MAN-HOURS PER DWI ARREST VERSUS TYPE OF PROJECT

Type Project	Nature	PMH/DWI							
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County	Rural Urban	13							
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PER DWI ARREST VERSUS

	Туре	Degree of Motivation							
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Cost Reductions in Entorcement Patron, Poggage & Parte Stane level of DWL arrest productivity would require the same expenditure of funds whether federally or lecally funded. The Degree of Motivation costs during the period of MITSA \$ 242.000 was approximately \$9 per High costs of an orcement patrols ult: patrol man-hour. All makes concluded could be made by avitzelsing the level avitzenest vation of thrizenseld cuve patrol officers, by being more burden of DWI arrests increasingly to 9d1 un title yd 29.5 101 un 19.481. selective in areas and times of enforcement, or 0.75 anatz Alfaragragraphs. 26.0 11 90 the regular patrols. These three Jepte pozgijiza 9.5 10.1 11.5 City 6.6 7.5 8.4 were initial officer. Cosl Reductions m

training and equipment procurement. All successful that their training programs were

Level of Officer Motivation, Research by NHTSA and reports from individual ASAP sites indicate that the degree of officer motivation is one, if not the major, factor in DWI arrest productivity. While there has been little or no quantification of this influence, it is believed that motivation accounts for as much as plus or minus 20 percent in DWI arrest productivity. The effective of the different levels of motivation on DWI arrest productivity is whown on Table 7. It should be noted that only one case City Prood bluow mail rost i documenter jeot and High Degree of Motivation) meets NHTSA's initial plansu viovidooffo of birdy representation ming factor and DWI narrest for avery & patrol man hours. This of

TABLE 7. PATROX MANIGORY) - 12 Well of productivity was bettered by only analof the ten ASAPian included in the sample for this research. Cost Reductions in Enforcement Training. Only three of (litervations in Enforcement Training.

bns gninfth PREPErson never unter Areas and Day of Meek Emphasis, The majority of the ASIAP sites, denloyed their selective enforcement patrols an allow nights of the week and on an area-wide basis. If an ASAP had

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would be funded adequately by approximately \$ 10,000 annually. TABLE 8. PATROL MAN-HOURS PER DWI VERSUS SUBSCIPTION FOR A PART AND AND A PART AND A PART AND A PART A

Catalytic Impact on Regular Forces. The vast majority of, if not all, police departments make fewer arrests for drinking-driving than they could with their regular police patrols. ASAP, through the use of overtime officers on selective enforcement and general indoctrination on the seriousness of the drinking-driving problem, had at most sites a positive catalytic effect on historical DWI arrest patterns. For the ten ASAP sites included in this research, there was an annual increase in regular patrol DWI arrests of 15,321; selective enforcement resulted in 21,103 DWI arrests annually. This catalytic effect (72 percent) is so large that it should be taken into account when planning the enforcement strategy for a locally funded ASAP. The effective DWIs arrested because of ASAP (Selective Enforcement equals 100) under various levels of catalytic impact are shown in Table 9; all of these levels were achieved by one or more of the ten ASAP sites included in this research.

TABLE 9. CATALYTIC IMPACT OF ASAP

Increase RP/ASAP DWI (%)	Increase RP/ASAP DWI (%) DWI	
10	90	127.25
Zero	100	114.53
+ 25	125	91.62
+50	150	76.35
+100	200	57.26
+200	300	38.17
+400	500	22.90
+600	700	16.36

In addition to these planning factors, consideration should be given to the effect of issuing traffic citations for the "probable

cause" stop of potential DWIs. There was a wide variation of strategies employed by the ten ASAP sites included in this research, ranging from over 9 traffic citations per DWI arrest to none. The typical citation generated either \$10 or \$20 in revenue.

D. Adjudication

The overall cost of Adjudication was developed by combining the expenditures for judges, prosecutors, public defenders, probation officers, pre-sentence investigation and special costs (training, expert witness, and jury fees).

1. Experience From NHTSA-Funded ASAPs

Average costs for performance of adjudication, together with offsetting revenues are contained in Table 10. These costs include the funds provided by NHTSA and the local contribution, both direct and indirect. Overall, the typical project expended about \$229,000 annually for operating expenses, required \$23,000 to plan for the deluge of DWIs, and generated \$464,000 annually in fines, fees, and court costs.

FABLE 10	. AVERAGE	ADJUDICATIO	N COSTS
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usanus)	(thousands)	Start-Up Costs* (thousands)		
121	\$710	S 1		
315	\$408	\$11		
5197	\$398	\$10		
	5121 5315 5197	\$121 \$710 \$315 \$408 \$197 \$398 scluded; \$147,000 spectrum		

The major expenditures for start-up costs were for the training of additional prosecutors and probation officers, and for pre-sentence investigation personnel. Annual operating expenses went almost entirely for salaries of additional personnel needed to process the enormous increases in DWIs being referred to the courts, and for the new pre-sentence investigation function.

The revenues generated by ASAP through court costs and fines, probation fees, and miscellaneous charges for blood tests were extensive, and offset the annual operating expenses by a factor of more than two to one. However, the penalty per disposition was not inordinate. In fact, the average cost to the DWI was just slightly less than \$100.

2. Areas for Cost Reductions

The feasibility of dramatic cost reductions in adjudication is very limited. The influx of substantial increases in DWIs requires at least additional support personnel for the prosecutor and the courts. The function of pre-sentence investigation, being totally new to the misdemeanor courts, requires substantial funding, as does the probation office.

Five of the ten sites recommended no change under a locally funded concept. The other five indicated that only modest reductions could be made, unless there were significant changes made in the depth of pre-sentence investigation or probation counseling.

Based on these recommendations, it appears that there are three levels for an adjudication program. All three levels include provisions for modest increases in support staffs for prosecution and the courts.

- Comprehensive PSI and Extensive Probation Counseling. This alternative requires approximately \$90 per disposition (court support \$15, PSI \$15, and probation \$60).
- Simplified PSI (either the self-administered portion of Mortimer-Filkins or an equivalent) and Limited Probation Counseling. This alternative requires approximately \$65 per disposition (court support -\$15, PSI-\$10, and probation--\$40).
- Limited PSI (BAC and Prior Record Check) and No Probation Counseling. This alternative requires approximately \$40 per disposition (court support \$15, PSI \$15, and probation \$20).

The revenue element of adjudication also requires careful consideration. The typical DWI pays just under \$100 in fines and fees. However, the law in almost every state permits fines of \$300 to \$500 for first offenses and substantially greater amounts for repeat offenders. Even very modest increases in the levels of fines and fees would permit a locally funded ASAP to be financially self-sufficient. In many areas, the revenue would not go to the governmental entity which bears the brunt of the costs of enforcement and administration, but on a systems basis the ASAP could be operated at breakeven.

E. Rehabilitation

The overall cost of rehabilitation was developed by combining the expenditures for the NHTSA-sponsored alcohol safety schools and all other rehabilitation modalities used by the ten

Rehabilitation Modality	Clients Assigned (%)	Cost Per Patient (dollars)
Alcoholics Anonymous	6.8	Zero
Alcohol Safety School	69.8	25
Chemotherapy	2.2	62
ΝΙΑΛΑ ΑΤΡ	8.4	65
Group Therapy	7.6	.90
Individual Therapy	2.2	203
In-Patient	3.0	410

TABLE 11. REIIABILITATION COSTS

ASAPs. Good cost data were available for the alcohol safety schools and that portion of the cost analysis can be considered accurate. The cost data for all other rehabilitation modalities were meager and that portion of the cost analysis should be viewed as a gross estimate.

1. Experience from NHTSA-Funded ASAPs

Annual client flows and average costs per patient for the major rehabilitation modalities are shown in Table 11. The costs include funds provided by NHTSA, direct local contributions, and tuition and/or fees paid by the

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patients. Start-up costs for rehabilitation, which are not included in the tabular data, averaged \$11,000 per site. The major expenditures for start-up costs were for the design of the curriculum for the alcohol safety schools.

Funding for the alcohol safety schools was provided by all three sources: NHTSA, local contributions, and patient tuition payments. Overall, NHTSA provided 30 percent, and the local contribution was 10 percent. Five of the ten ASAPs, which accounted for over 80 percent of the total client flow, required tuition payments of between \$15 and \$30, and these payments accounted for the remaining 60 percent of total annual costs.

2. Areas for Cost Reductions

There are two areas for cost reductions: start-up costs and patient tuition payments.

- Considering the wealth of material on the design of curriculum on file at NHTSA, start-up costs should not exceed \$5,000 for a new ASAP.
- Half of the sites considered in this analysis charged tuition payments. Most recommended that tuitions be increased to cover most, if not all, of the expenditures for rehabilitation. Based on NIAAA research which supports the thesis that a fee for service has therapeutic value, these sites recommended resonable tuitions of \$25 to \$75. However, no patient would be denied treatment because of an inability to pay. Rather, tuitions in excess of actual costs for the alcohol safety school would cover those unable to pay and help defray expenses for the more expensive treatment modalities.

F. Summary

Local or state governments which plan to implement an ASAP must address what is a fundamental issue in all countermeasures of their overall program. To what extent should the program be designed so that the abusive drinker-driver supports the DWI control system? The answer to that question will direct policy decisions in each of the ASAP countermeasures.

A framework for a systematic analysis of costs and revenues is presented in the subsequent section of this report.

A. Introduction

A "Cost-Effective ASAP" may be defined as a systems-oriented community action program designed to impact the impaired drinking driver where the revenue produced by the system closely approximates the cost to operate that system. The concept of an economically self-sufficient systems-oriented program is intuitively appealing, but for a variety of reasons, is virtually non-existent at any governmental level. Nonetheless, it is apparent that a community with both an impaired drinking-driver problem and a shortage of financial resources may see a cost-effective ASAP program as a potential solution.

Several years experience with ASAP programs has only reinforced the idea that each program is unique. It can be designed to operate in an effective and efficient manner only after identifying the extent of the local drinking-driving problem, surveying local resources, and formulating specific local operating objectives. One could consider the aforementioned tasks (identification of the problem, survey of resources, and formulation of objectives) to comprise a predesign phase of the ASAP planning function. Once completed, it is then possible to utilize that knowledge in combination with the recommendations contained in this document to design a potentially costeffective ASAP.

B. The Predesign Phase

Before goals and operating objectives are formulated, it is important to determine both the extent of the existing impaired drinking driver in the area to be impacted and the status of the current DUI control structure.

1. Survey of the Impaired Drinking-Driver Problem

There are two basic approaches that can be utilized to infer the extent and nature of the impaired drinking-driver problem within a geographical area. The easiest but least accurate approach consists of an examination of historical accident data for evidence of alcohol involvement, especially in fatal accident cases. Alcohol involvement, if present, would be more likely to be detected and reported in the fatal accident case than in nonfatal injury or property damage traffic accidents. Even so, the accuracy of the data is dependent upon such diverse factors as accident closure (determination of alcohol involvement or lack thereof for all drivers and pedestrians involved), presence or absence of laws governing alcohol chem tests on fatal accident victims, deaths occurring 6 hours or more after the crash, resulting in nonusable chem test information, departmental policy (police or public safety agency), detection skills, and reporting diligence of the investigating officer.

The usefulness of fatal accident information can be enhanced by an investigation of the data and circumstances surrounding each accident and in each case making a determination: alcohol involved, nonalcohol involved, or alcohol involvement unknown. It may be necessary to infer alcohol involvement without direct and conclusive evidence. For example, a single vehicle accident occurring in the early morning hours where the only passenger is fatally injured and has a high BAC (Blood Alcohol Concentration) but the driver survives would probably be alcohol involved. This may be true even though no indication of "driver has been drinking" is present in the accident report. If the "unknowns" are separated from the data where a positive or negative alcohol

determination has been made, then the ratio of positive determinations to total determinations (positive plus negative) can be formed. When converted to a percentage, a generally reasonable estimate of alcohol involvement in fatal accidents is obtained. Injury and property damage accidents attributed to impaired drinking drivers as determined from accident reports are generally significantly lower than their actual occurrence. It is not uncommon to find alcohol mentioned as a factor in only 2 to 5 percent of all nonfatal traffic accidents in a community. Research has indicated, however, that this figure is more likely in the 10- to 20-percent range.

A more accurate determination of the existing impaired drinking-driver problem in the community can be had through the use of a random roadside survey. The roadside survey simply consists of "voluntary" interviews with drivers randomly selected from the highways and streets within the community. Interviews are taken and data recorded so that anonymity of the respondent is preserved. Respondents are asked to take a chemical test (breath) for blood alcohol concentration as well as to respond to questions designed to indicate their knowledge of and attitudes toward the drinking-driver problem. Procedures for site selection, protocol, number of interviews required, etc., are contained in a NHTSA publication. Not only will the roadside survey technique enable the community to determine the severity of their problem, it will permit them to identify components of the population (age, sex, racial group, occupational group, etc.) where the problem is most severe. This information is important in planning effective public information and education programs.

Experience has shown that roadside surveys can be conducted safely, efficiently, and cause virtually no residual resentment among those interviewed. It is highly recommended that roadside surveys be conducted to provide baseline data for program planning purposes. Additional surveys can also be conducted periodically during the time that an ASAP is in operation to provide information on program effectiveness.

2. Status of the Current DUI/DWI Control Structure

Prior to any systems design activity relative to ASAP implementation, one must discover the current status of operations in the enforcement, prosecution, and judicial components of the community as they relate to the handling of DUI cases. Policy and management prerogatives in the detection, apprehension, prosecution, and adjudication of DUI cases must be sorted out from the mandates of state and municipal law.

It is imperative that state law and local ordinances that could affect ASAP operation be elucidated in the predesign phase. Among the statutes of interest would be those laws which:

- Affect the DUI arrest itself (including per se, pre-arrest test, chem test refusal, etc.).
- Might be utilized to provide or permit assignments to rehabilitation countermeasures.
- Control the sale, possession, and transportation of alcoholic beverages (state, county, city).
- Address suspension/revocation procedures for persons convicted of DUI.

It is also important to consider "in process" legislation and the effects it may have on future ASAP operations. If relevant state legislation is under consideration, it would be wise to investigate the situation, obtain a copy of the bill, and urge the appropriate city "lobbyist" to support or oppose the bill, as the case may be.

Further, it is of the utmost importance that a "client flow diagram" of current operations be constructed. Basically, the client flow diagram represents the possible activities and decisions of the client as he is processed through the system in conjunction with the activities and decisions made by the police, prosecution, and court staff. An example of a comprehensive client flow diagram is given in Appendix B. Individuals intimately familiar with the operation concerned (i.e., police management, municipal prosecutor, municipal judge, court clerk) should be consulted as appropriate during construction of the client flow diagram. Note that the numbers of clients traversing a particular path can be estimated with a fair degree of accuracy by using the aforementioned consultants' statistics or "educated guesses." Constructing the client flow diagram actually serves several purposes. Among them is to provide insight into the following:

- The extent of cooperation among the police-prosecution-court staff.
- The kinds of formal and informal information exchange that occur among the PPC staff.
- The extent and type of probation services utilized by the court.
- Penalties invoked by the court for first and subsequent DUI offenses (fine-paid or suspended, jail-served or suspended, court costs levied, etc.).
- Police policies regarding first and subsequent DUI offenses (charges filed, decline to file, etc.).
- Prosecution policies regarding first and subsequent DUI offenses (plea bargaining, charge reduction, decline to file, etc.).

Rehabilitation treatment alternatives should be identified and categorized according to type (i.e., in-patient, group therapy, family therapy, individual therapy, education, etc.), costs, availability, location, and capacity. Experience has shown that organizations such as Alcoholics Anonymous can be easily expanded. Since the probation office will probably be faced with the task of monitoring clients who are attending one or more rehab treatment alternatives, the probation staff should be questioned in the predesign phase regarding the capacity to handle this task.

Current facilities, equipment, and level of training in police, prosecution, and court areas should be determined in the predesign phase. Some of the considerations include:

- Level of enforcement personnel training and competence in detection, apprehension, court room behavior, chem test operation, etc.
- Availability and location of police facilities, such as booking stations and prisonerholding facilities.
- Availability and condition of police equipment required for an ASAP activity such as patrol vehicles, breathalyzers or other chem test units (i.e., chromatograph).

• Availability of "spare judicial capacity" to handle additional cases.

The success of any program that operates within a political system depends on the ability of the program manager to cope with the political constraints and pressures that the program may either generate or with which it must coexist. It is important that existing constraints and attitudes of various population segments be understood during the predesign phase. Some of the "population segments" whose views toward an ASAP program (i.e., is alcohol-impaired driving a relatively important problem? should it receive attention?) are important to its success include:

- The general public
- Legislators-city council members
- City manager-mayor-county executive-governor
- City, county, state bar associations
- News media (management level).

The success or failure of an ASAP depends in large measure on the abilities of and status given to the project manager. He should have a management style of sufficient flexibility to cope with and control a project over most of which he will not have (in most instances) direct line supervisory responsibilities. For example, the ASAP project manager has no direct control over the police function, but DUI enforcement activities are of vital importance to his program. This problem can be neutralized somewhat by giving the ASAP manager sufficient job status. In a city-wide ASAP, for example, the ASAP director should have similar pay and status to the police chief and municipal counselor or in general a "department head" position. This further implies that the ASAP project must not be attached directly to or identified with any major countermeasure area (i.e., police department, courts, prosecution). The identification of the ASAP as a "part of" the police department or courts may result in either undue emphasis of one countermeasure area with the subsequent result an unbalanced program or promote petty jealousy and undue friction between agencies or both.

After both the existing problems and current system components have been elucidated, it is then possible to realistically address the problem of formulating goals and objectives. Goals and objective formulation is necessary prior to the design phase if one expects to design an efficient, potentially effective, and balanced program.

3. Formulating Goals and Objectives

Goals may be considered as a reasonably logical eventual consequence of the achievement of relevant objectives. Goals may not be easily quantifiable or, if quantifiable, may not be easily or accurately measured. Most objectives, on the other hand, are both quantifiable and measurable. It is preferrable in the process of goal and objective formulation to initially define several goals and then decide upon relevant objectives. Examples of reasonable goals include:

- Improvement in effectiveness and efficiency of the entire highway safety system within the community
- Integration of criminal justice and health care delivery systems into the highway safety system
- Increased awareness and recognition of the problems caused by the impaired drinking driver
- Reduction in alcohol-related traffic accidents
- Reduction in average BAC levels of the driving public.

Of these goals, only the last two are quantifiable, and even then ASAP did not determine what levels of activity and effectiveness are required in the various countermeasures to achieve a statistically significant reduction in elcohol-related traffic accidents or BAC levels. Therefore, objectives should be set and quantified on a best judgment basis, for example:

- Enforcement
 - Increase DUI arrests by x percent over present levels
 - Provide training adequate for DUI detections and apprehensions which result in prosecutions in x percent of the arrests
- Adjudication
 - Improve court and prosecution procedures to provide an average arrest to final disposition time of x days.
 - Implement a workable court-referral PSI system for DUI cases to enable degree of drinking problem categorization and rehabilitation recommendations for x percent of court dispositions.
 - Improve court cooperation to provide for acceptance of PSI recommendations for rehabilitation in x percent of court dispositions
- Rehabilitation
 - Provide educational programs adequate to treat x percent of the DUI cases categorized as social drinkers
 - Provide education and/or rehabilitation programs adequate to treat x percent of the DUI cases categorized as mid-range or severe problem drinkers.

A simplified client flow diagram (Figure 1) can be constructed which reflects the goals and objectives of the individual ASAP program. Quantification of the objectives allows a determination of the magnitude of the proposed activities. Appendix C contains a predesign phase checklist to assist planners during the formative phase of a locally funded ASAP.

An additional consideration in ASAP system design is the matter of cost-effectiveness discussed earlier. The system can be designed so that projected revenues approximate estimated costs. This is a major policy decision which should be addressed in the predesign phase:

• To what extent should the program be designed so that the abusive drinker-driver supports the DUI control system?

C. The Design Phase

If ASAP is to exist as an integrated goal-oriented system, certain elements are necessary, independent of size or type (city, county, state) of jurisdiction. These elements include program administration, enforcement, adjudication (prosecution, courts, pre-sentence investigation, and probation), and rehabilitation. The questions which must be addressed in each of these areas are discussed in the following sections. Those questions which are particularly cost-revenue-oriented are indicated by an asterisk.

1. Program Administration

Program administration has three basic areas of responsibility: project management, management information systems and evaluation, and public information and education. Costs depend almost exclusively on the size of the management staff planned for the project.



*Determined by program objectives,

tBased upon NHTSA estimates.

FIGURE 1. CLIENT FLOW DIAGRAM

- a. What size staff is planned for the project?
 - Project director, PIE specialist, and secretary (start-up costs: \$25,000; annual costs: \$60,000)
 - Project director, assistant project director, countermeasure coordinator, PIE specialist, and secretary (start-up costs: \$40,000; annual costs: \$90,000)
 - Project director, assistant project director, management information specialist, countermeasure coordinator, PIE specialist, secretary, and clerk typists/data reducers (start-up costs: \$50,000; annual costs: \$120,000)

Determine program administration costs by selection of applicable alternatives.

3.5-Year Cost = 3 (Annual Costs) + (Start-Up Costs) (Eq. !V-1)

- b. What governmental entity will bear the costs for program administration?
 - City government
 - County government
 - State government

Enter your decisions in the table below:

C	State Costs			County Costs			City Costs		
Countermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs								:	

2. Enforcement

The following questions are pertinent to the analysis of costs and revenues from enforcement:

a. What is the existing level of DUI arrests within the geographic area of the project? (from Client Flow Diagram, block 1)

b. What is the objective for increasing DUI arrests? (from Client Flow Diagram, block 2)

*c. What is the anticipated catalytic effect on DUI arrests for the regular forces (-- 10% to + 600%)?

Determine number of required selective enforcement DUI arrests by application of the following algorithm:

(Historical DUI Level) × (Percent Increase Planned – Percent Catalytic Impact Anticipated)/100 = . Selective Enforcement DUI Arrest Requirement (SEAR) (Eq. IV-2)

d. What type of project is planned (city, county, or state)?

20

- *e. What is the anticipated degree of motivation of the enforcement agency?
 - Low
 - Average
 - High

f. What is the planned strategy for selective enforcement?

- Nonselective (all nights of the week, all areas)
- Selective (Weekend nights, high-risk areas)

Determine number of selective patrol man-hours required to produce the required arrest levels by application of the following algorithm, using the PMH factor from Table 12:

(SEARXPMII Factor) = Selective Enforcement PMII (SEPMII)

(Eq. IV-3)

TABLE 12. PATROL MAN-HOURS PER DWI VERSUS SELECTIVITY OF
PATROL STRATEGY, DEGREE OF MOTIVATION, AND
TYPE OF PROJECT (PMH FACTOR)

	Degree of Motivation									
Type Project	Hi	gh	Ave	rage	Low					
	Selective	Non- Selective	Selective	Non- Selective	Selective	Non- Sclective				
State County City	26.0 9.2 6.6	29.5 10.5 7.5	32.6 11.4 8.4	37.0 13.0 9.5	39.2 13.6 10.1	44.5 15.5 11.5				

Determine selective enforcement costs by application of the following algorithms:

Annual Costs = (SEPMH) (\$9) (1,1) Start-Up Costs = (SEPMH) (\$9) (0,28) 3.5-Year Costs = (3) (Annual Costs) + (Start-Up Costs) (Eq. IV-4)

- g. What governmental entity will bear the costs for enforcement?
 - City government
 - County government
 - State government

Enter your decisions in the following table:

	State Costs			County Costs			City Costs		
Countermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs				·					
Enforcement Costs									
Subtotal									

*h. What is your planned policy for issuance of traffic citations for probable cause DUI detections?

- No Citations
- 1/1 DUI increase
- 2/1 DUI increase
- 3/1 DUI increase
- 4/1 DUI increase

- 5/1 DUI increase
- 6/1 DUI increase
- 7/1 DUI increase
- 8/1 DUI increase
- 9/1 DUI increase

*i. What will be the average revenue from each traffic citation?

- Warning
- \$10
- \$20

Determine enforcement revenue by application of the following algorithm:

(DUI Increase) × (Traffic Citation Policy) × (Average Fine) = Enforcement Revenue 3.5-Year Revenue = 3 (Enforcement Revenue)

(Eq. IV-5)

What governmental entity(ies) will receive the revenue from probable cause stops

• City

j.

- County
- State

Enter your decisions in the following table:

Constant	State Costs		County Costs			City Costs			
Countermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs									
Enforcement Costs									
Enforcement Revenues									
Subtotal									

3. Adjudication

The following questions are pertinent to the analysis of costs and revenues from adjudication:

a. How many cases will be prosecuted in the court system? (from Client Flow Diagram, block 3)

Determine court support costs:

(No. Cases Prosecuted) (\$15) = Court Support Costs

(Eq. IV-6)

b. How many pre-sentence investigations will be conducted? (from Client Flow Diagram, block 4)

*c. What level of comprehensiveness is planned for the pre-sentence investigation?

- Comprehensive PSI (\$15)
- Simplified PSI, either the self-administered questionnaire of Mortimer-Filkins or an equivalent (\$10)
- Limited PSI, BAC, and prior record check (\$5)

Determine PSI costs:

(No. Pre-sentence Investigations) (Level of Comprehensiveness) = PSI Costs (Eq. IV-7)

d. How many probation followups will be conducted? (from Client Flow Diagram, blocks 14, 15, 16, and 18)

e. What level of comprehensiveness is planned for the probation followup?

- Extensive probation counseling (\$60)
- Limited probation counseling (\$40)
- No probation counseling, check in only (\$20)

Determine probation costs:

(No. of Probation Followups) (Level of Comprehensiveness) = Probation Costs (Eq. IV-8)

Determine adjudication costs by summing Eqs. IV-6, IV-7, and IV-8.

Court Support Costs + PSI Costs + Probation Costs = Adjudication Costs (Eq. IV-9) 3.5-Year Cost = 3 (Adjudication Costs)

- f. What governmental entity(ies) will bear the costs for adjudication?
 - City
 - County
 - State

Enter your decisions in the following table:

C	State Costs		County Costs			City Costs			
Countermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs									
Enforcement Costs									
Enforcement Revenues			· · · · ·						
Adjudication Costs			1						
Subtotal									

g. What level of fine will be assessed?

- Social drinkers
- Mid-range problem

_____ (g.1) _____ (g.2)

	• Severe problem(g.3)
	• Traditional sanction (g.4)
h.	How many cases will be handled by the courts?
	• Social drinkers (from Client Flow Diagram, block 8)(h.1)
	• Mid-range problem (from Client Flow Diagram, block 9)(h.2)
	• Severe problem (from Client Flow Diagram, block 10)(h.3)
	• Traditional sanction (from Client Flow Diagram, block 17)(h.4)
etermine co	urt fine revenue by summing the following algorithms:
	• Social drinkers $(g, 1) \times (h, 1) =$
	• Mid-range problem $(g.2) \times (h.2) =$
	• Severe problem $(g,3) \times (h,3) = $
	• Traditional sanction $(g.4) \times (h.4) =$
,	Total court fine revenues(Eq. IV-10)
	 No Yes How much?
j. Diagram, bloc	How many pre-sentence investigations will be conducted? (from Client Flow k 4)
etermine pre	e-sentence investigation fee revenue:
(PS	SI Fee) (No. of Pre-sentence Investigations) = PSI Fee Revenue (Eq. IV-11)
k.	Do you plan to charge a probation supervisory fee?
	• No

Determine probation supervisory fee revenue:

(Probation Supervisory Fee)(No. of Probation Followups) = Probation Supervisory Fee Revenue (Eq. IV-12)

m. What governmental entity will receive the revenue from court fines, pre-sentence investigation fees, and probation supervisory fees?

- City
- County
- State

Determine adjudication revenue by the summation of Eqs. IV-10, IV-11, and IV-12.

Court Fine Revenue + Probation Supervisory Fee Revenue + PSI Fee Revenue = Adjudication Revenue

3.5-Year Revenue = 3 (Adjudication Revenue)

Enter your decisions in the following table.

Constanting Areas	State Costs		County Costs			City Costs			
vounermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs									
Enforcement Costs									
Enforcement Revenues									
Adjudication Costs									
Adjudication Revenues									
Subtotal									

(Eq. IV-13)

4. Rehabilitation

The following questions are pertinent to the analysis of costs and revenues from rehabilitation:

٠,

a How many social drinkers will be assigned to a rehabilitation program? (from Client Flow Diagram, block 11) How many are estimated as assigned to:

•	Alcoholics Anonymous	(a.1)
•	Educational school	(a.2)

b. How many mid-range problem drinkers will be assigned to a rehabilitation program? (from Client Flow Diagram, block 12) How many are estimated as assigned to:

•	Alcoholics Anonymous		(b.1)
•	Educational school		(b.2)
•	Chemotherapy	6 a.	(b.3)
•	NIAAA ATP	1, 1	(b.4)
•	Group therapy	•	(b.5)

c. How many severe problem drinkers will be assigned to a rehabilitation program? (from Client Flow Diagram, block 13) How many are estimated as assigned to:

•	Alcoholics Anonymous		(c.1)
•	Educational school		
•	Chemotherapy		
٠	ΝΙΛΛΑ ΑΤΡ	1	(c.4)
•	Group therapy	1	(c.5)
•	Individual therapy		
•	In-patient	:	(c.7)

Determine rehabilitation costs by summation of the following algorithms:

Chemotherapy [(a.3) + (b.3)] × \$62	
NIAAA ATP / (b.4) + (c.4) X	
Group therapy [(b.5) + (c.5)] × \$90	
Individual therapy $ (c.6) \times 203	······
In-patient $l(c,7)$ × \$410	

(Eq. IV-14)

3.5-Year Cost = 3 (Total Rehabilitation Costs)

d. What governmental entity(ies) will bear the costs for rehabilitation?

City

County

State

Enter your decisions in the following table.

	State Costs			County Costs			City Costs		
Countermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs									
Enforcement Costs									
Enforcement Revenues						•			
Adjudication Costs									
Adjudication Revenues									
Rehabilitation Costs									
Subtotal									

e. What tuition do you plan to charge for the various rehabilitation modalities?

• Educational school		(e.1
• Chemotherapy	· · · · · ·	(e.2
• NIAAA ATP	· .	(e.3
• Group therapy		(e.4
• Individual therapy		(e.5
• In-patient	· ·	(e.6
• Standard fee for all	clients	(e.7

· ·

Determine rehabilitation revenues from the following algorithm:

•

- Educational school $|(a, 2) + (b, 2) + (c, 2)| \times (e, 1) =$ _____
- Chemotherapy /(b.3) + (c.3) / X (e.3) =
- $NIAAA ATP | (b.4) + (c.4) | \times (e.3) =$
- Group therapy $|(b,5) \times (c,5)| \times (e,4) =$
 - Individual therapy (c.6) \times (e.5) =

• In-patient (c. 7) \times (e.6) = OR • Standard fee $[(a.2) + (b.2) + (b.3) + (b.4) + (b.5) + (c.2) + (c.3) \times (e.7)] + (c.4) + (c.5) + (c.6) + (c.7)$ Total rehabilitation revenue (Eq. IV-15)

3.5-Year Costs = 3 (Total Rehabilitation Revenue)

- f. What governmental entity(ies) will receive the revenue from rehabilitation tuitions?
 - City
 - County
 - State

Enter your decisions in the following table.

Construction	State Costs		Co	County Costs			City Costs		
Countermeasure Area	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr	Start-Up	Annual	3.5 Yr
Program Administration Costs									
Enforcement Costs									
Enforcement Revenues									
Adjudication Costs									
Adjudication Revenues									
Rehabilitation Costs									
Rehabilitation Revenues			!						
Grand Total									

5. Summary

The preceding procedure will result in a reasonably accurate planning estimate for your Alcohol Safety Action Project. The overall result should then be compared against the policy decision you addressed in the predesign phase: "To what extent should the program be designed so that the abusive drinker-driver supports the DWI control system?"

If you had made the policy decisions that the abusive drinking driver should totally pay for the system, it is probable that your initial design will not result in the correct balance of costs and revenues. However, with the analytic framework developed, it will be easy to make minor modifications (generally to the asterisked questions) in your policies so that you do achieve the desired balance.

The final section of this report presents an example of costs and revenues from alternative policy decisions, and shows the magnitude of economic impact which results from different decisions.

V. USE OF ASAP DESIGN ALGORITHMS

A. Introduction

The purpose of this section is to illustrate the use of the ASAP planning algorithms presented in Section IV and to show the effects policy decisions made during the early stages of planning have on the cost-effectiveness of a locally supported ASAP program. The impact of policy decisions will be developed through the application of the algorithms to a city of 500,000 population.

B. The Predesign Phase

Activities in the predesign stage include the determination of the extent of the impaired drinking driver in the area, the determination of the status of current DUI control structures, and the establishment of appropriate program goals and objectives.

1. Survey of the Impaired Drinking-Driver Problem

In order to determine the level of ASAP effort needed to reduce the impact of impaired drinking drivers on the motoring public, it is first necessary to evaluate the seriousness of the

TABLE 13. ROADSIDE SURVEY RESULTS BAC LEVELS

Category	Number	Percentage
Participants	1088	100
Had been drinking (BAC<0.05)	260	23.9
Impaired (BAC \ge (1.05)	124	11.4
DW1 (BAC > 0.1)	46	4.2
"Bombed" (BAC = 0.15)	18	1.7

TABLE 14. PERTINENT DATA-ANNUAL AVERAGES

Population	Fatal A	Accidents	Injury A		Licensed	DUI
ropulation	Crashes	Fatalities	Crashes	Injuries	Drivers	Arrests
500,000	82	90	5,450	8,150	328,000	1,400

2. Status of DUI/DWI Control Structure

Within each city, county, or state considering the implementation of an ASAP, a survey must be made to determine the current status of operations in the enforcement, prosecution, and judicial components of the community as they relate to the handling of DUI cases. Included in items to be considered are: state law and local ordinances; "in process" legislation; rehabilitation alternatives: current facilities, equipment and training levels in police prosecution and court areas; and the political constraints and pressures that the program may generate or with which it must coexist. Among the outputs of this effort will be a "client flow" diagram which provides an overall view of the inter-relationships of these factors. The client flow diagram presented in Appendix B was adopted for this simulation; specific policy or operational decisions based on results of the predesign DUI/DWI control structure survey which affect the ASAP system design are discussed as they apply to the design activities.

impaired drinking-driver problem in the program area. Data on the extent and nature of the DUI problem can be obtained through examination and evaluation of historical accident data or through the conduct of voluntary roadside surveys. The drinking-driver problem assumed in the simulation is indicated by the data presented in Table 13. The values presented were obtained by averaging the results of roadside surveys conducted in several of the cities evaluated during this study. Additional

> data pertinent to the establishment of an ASAP in the simulation is given in Table 14. This information is based upon averages obtained from the 10 ASAP's evaluated during the study, normalized to a population of 500,000.

3. Formulating Goals and Objectives

The goals established for the planned ASAP are as follows:

- Improvement in efficiency and effectiveness of the entire highway system within the community.
- Integration of criminal justice and health care delivery systems into the highway safety system.
- Increased awareness and recognition of the problems caused by the impaired drinking driver.
- Reduction in alcohol-related traffic accidents.
- Reduction in average BAC levels of the drinking public.

As mentioned in Section IV, the goals of an ASAP represent reasonably logical eventual consequences of ASAP activities but cannot be quantified or easily measured. In order to provide activities which will contribute to the realization of the established goals and to provide a means of measuring the effectiveness and appropriateness of on-going ASAP activities, reasonable "best judgment" objectives must be set and quantified. Objectives for the ASAP designs in this simulation are established as follows:

• Enforcement

- Increase DUI arrests by 300 percent
- Provide training adequate for DWI detection and apprehension which results in the prosecution of 95 percent of the arrests.
- Adjudication
 - Implement a workable court-referral PSI system for DUI cases to enable degree of drinking problem categorization and rehabilitation recommendations for 90 percent of court dispositions.
 - Improve court cooperation to provide for acceptance of PSI recommendations rehabilitation in 90 percent of court dispositions.

Rehabilitation

- Provide educational programs adequate to treat 100 percent of the DUI cases categorized as "social" drinkers.
- Provide educational/rehabilitation programs adequate to treat 100 percent of the DUI cases categorized as "mid-range" or "severe" problem drinkers.

Using the data assembled during the predesign phase and the values developed during the quantification of objectives, a simplified client flow diagram can be constructed which reflects the magnitude of the proposed activities. See Figure 2.



1Based upon NHTSA estimates.

FIGURE 2 SIMPLIFIED CLIENT FLOW DIAGRAM WITH HYPOTHETICAL VALUES

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Once the necessary information on the severity and handling of DUI offenders in the ASAP area has been gathered and appropriate goals and objectives established, an ASAP can be designed which will be responsive to the needs of the community. An additional major policy decision which must be considered during the design phase is:

• To what extent should the program be designed so that the abusive drinker-driver supports the DUI Control System?

C. The Design Phase

The four major elements of any integrated goal-oriented ASAP system are: program administration, enforcement, adjudication, and rehabilitation. Each of these elements will be discussed separately in the following subsections in order to illustrate the use of the algorithms developed in Section IV; each element will be evaluated for three cases:

- Case A reflects a policy of low cost-effectiveness; the community assumes the responsibility of supporting ASAP activities.
- Case B reflects a policy of average cost-effectiveness; the abusive drinker-driver is expected to support the bulk of the ASAP program.
- Case C reflects a policy of high cost-effectiveness; the DUI offenders of the community not only support ASAP activities but also provide additional funds to involved governmental agencies for other uses.

Changes in the level of enforcement, adjudication, and rehabilitation between the three cases are minimized to provide approximately the same level of services to the community.

1. Program Administration

Evaluation of the existing severity of the DUI problem and existing law enforcement, judicial, and rehabilitation services resulted in the determination that an ASAP administrative staff consisting of a project director, assistant project director, countermeasure coordinator, PIE specialist, and secretary would best meet the needs of the community. It was also decided that the ASAP would come under the authority of and be funded by the city government. Program administration will be the same for Case A, Case B, and Case C.

These decisions result in the following cost determination. (Ref. Section IV.C.1a and b. The numbers in the left margin refer to the equations developed in Section IV.)

(Eq. IV-1)	Start-Up Costs	\$40,000
	Annual	90,000

3.5-Year Costs = 3(90,000) + 40,000 = \$310,000

2. Enforcement

Parameters held constant for all three cases under consideration include:

- Existing level of DUI arrests 1400/yr
- Objective for increasing DUI arrests -300 percent

- Type of project—City
- Governmental agency which will bear enforcement costs--City
- Planned policy for issuance of traffic citations for probable cause DUI detections—
 4/1 DUI Increase
- Governmental entity which will receive revenue from probable stops—City

Case A: Enforcement decisions which result in a community-supported ASAP are:

- Anticipated catalytic effect- 0 percent
- Anticipated degree of motivation of the enforcement agency Low
- Planned strategy for selective enforcement Nonselective (all nights of week, all areas)
- Average revenue from each traffic citation None, warning only

Based on these decisions, enforcement costs for Case A are as follows:

(Eq. IV-2)SEAR = $(1400) \times (300 \ 0)/100 = 4200$ (Eq. IV-3)SEPMH = $(4200 \times (11.5) = 48,300)$ (Eq. IV-4)Annual Costs = $(48,300) \times (9) \times (1.1) = 478,170$ Start-Up Costs = (48,300) (9) (0.28) = 121,7163.5-Year Costs = 3(478,170) + 121,716 = 1,556,226

Revenues for enforcement activities under the above assumptions are:

(Eq. IV-5) Enforcement Revenues = (4200) (4) (0) = \$03.5-Year Revenues = (3) (0) = \$0

Case B: An average cost-effective program might adopt the following parameters:

- Anticipated catalytic effect 100 percent
- Anticipated degree of motivation Average
- Planned selective enforcement strategy- Selective (weekend nights, high-risk areas)
- Average revenue from traffic citations-\$10

Costs under these assumptions are:

(Eq. IV-2) SEAR = (1400) (300 - 100)/100 = 2800

- (Eq. IV-3) SEPMH = (2800)(8.4) = 23,520
- (Eq. IV-4) Annual Costs = (23,520)(9)(1.1) = 232,848
- Start-Up Costs = (23,520)(9)(0.28) = 59,270
 - 3.5-Year ('osts = (3) (232,848) + 59,270 = 757,814

Revenues received from average traffic violation fine of \$10 are:

(Eq. 1V-5) Enforcement Revenues = (2800) (4) (10) = \$112,000 3.5-Year Revenues = 3 (112,000) = \$336,000

Case C: Net revenues can be realized from ASAP-related enforcement activities if the following parameters are established:

- Anticipated catalytic effect 200 percent
- Anticipated degree of motivation High
- Planned enforcement strategy Selective

• Average revenue from citations \$20

Enforcement costs are:

(Eq. IV-2)	SEAR = (1400) (300 - 200)/100 = 1400
(Eq. IV-3)	SEMPH = (1400)(6.6) = 9240
(Eq. IV-4)	Annual Costs = (9240) (9) (1.1) = 91,476
	Start-Up Costs = (9240) (9) (0.28) = 23,285
	3.5-Year Costs = (3) (91,476) + $23,285 = 297,713$

Revenues from enforcement activities:

(Eq. IV-5) Enforcement Revenues = (1400) (4) (20) = 112,0003.5-Year Revenues = 3 (112,000) = 336,000

3. Adjudication

Policy decisions and operational estimates affecting adjudication which are held constant for all three Cases include:

- Number of cases prosecuted -5320
- Number of pre-sentence investigations 4788
- Number of probation followups-5320
- Level of probation counseling-Limited (\$40 per case)
- Revenue calculations will be based on an average fine for all classifications of offenders
- Costs for adjudication will be the responsibility of the county government
- Revenues from adjudication will be received by the county government.

Case A: Computations of costs and revenues for a community-supported ASAP include the following assumptions:

- Level of pre-sentence investigation -- Comprehensive PSI (\$15)
- Average court fine per DUI case \$50

- Pre-sentence investigation fee-\$0
- Probation followup fee \$0

Costs:

- (Eq. IV-6) Court Support Costs = (5320) (15) = \$79,800
- (Eq. IV-7) PSI Costs = (4788) (15) = \$71,820
- (Eq. IV-8) Probation Costs = (5320) (40) = \$212,800
- (Eq. 1V-9) Adjudication Costs = \$79,800 + 71,820 + 212,800 = 364,420
 - 3.5-Year Costs = (3) (364,420) = 1.093,260

Revenues:

- (Eq. IV-10)Court Fine Revenue = (5320)(50) = \$266,000(Eq. IV-11)PSI Fee Revenue = (4788)(0) = \$0
- $(\log 1V_{-1.2})$ Probation Supervisory Fee Revenue = (5320) (0) = \$0
- (Eq. IV-13) Adjudication Revenue = 266,000 + 0 + 0 = \$266,000
 - 3.5-Year Revenue = 3 (266,000) = \$798,000

Case B: An average cost-effective ASAP could be realized by instituting the following decisions:

- Level of PSI Simplified PSI (\$10 per case)
- Average court fine \$75
- Pre-sentence investigation fee \$10
- Probation followup fee \$20

Costs:

- (Eq. IV-6) Court Support Costs = (5320) (15) = \$79,800
- (Eq. IV-7) PSI Costs = (4788)(10) = 47,880
- (Eq. 1V-8) Probation Costs = (5320) (40) = 212,800
- (Eq. IV-9) Adjudication Costs = \$79,800 + \$47,880 + \$212,800 = \$340,480
 - 3.5-Year Costs = 3(340,480) = \$1,021,440

Revenues:

- (Eq. IV-10) Court Fine Revenues = (5320) (75) = \$399,000
- (Eq. IV-11) PSI Fee Revenue = (4788)(10) = \$47,880
- (Fq, IV-12) Probation Followup Revenue = (5320) (20) = \$106,400
- (Eq. IV-13) Adjudication Revenues = 399,000 + 47,880 + 106,400 = \$553,2803.5-Year Revenues = (3) (553,280) = \$1,659,840

Case C: A net revenue from ASAP activities would be realized under the following policy and operational assumptions:

- Level of PSI Limited (\$5 per case)
- Average court fine \$100
- PSI fee \$40
- Probation followup fee \$40

Costs:

(Eq. IV-6)	Court Support Costs = (5320) (15) = \$79,800
(Eq. IV-7)	PSI Costs = (4788)(5) = \$23,940
(Eq. IV-8)	Probation Costs = $(5320)(40) = $212,800$
(Eq. 1V-9)	Adjudication Costs = $$79,800 + $23,940 + $212,800 = $316,540$ 3.5-Year Costs = (3) (316,540) = \$949,620

Revenues:

(Eq. IV-10)	Court Fine Reven	ues = (5320) (100) = \$532,000	
-------------	------------------	--------------------------------	--

- (Eq. 1V-11) PSI Fee Revenues = (4788)(10) = \$47,880
- (Eq. IV-12) Probation Supervisory Fee = (5320) (40) = \$212,800
- (Eq. IV-13) Adjudication Revenues = 532,000 + 47,880 + 212,800 = \$792,6803.5-Year Revenues = (3) (792,680) = \$2,378.040

4. Rehabilitation

Rehabilitation costs and revenues are based on the following policy decisions and operational estimates which are applied to all three cases under consideration:

- Number of "social drinker" DUI cases-1292
 - Assigned to educational school (100 percent) -1292
- Number of "mid-range problem drinker" DUI cases-1724
 - Assigned to educational school (50 percent) 862
 - Assigned to ATP (50 percent)- 862
- Number of "severe problem drinker" DUI cases 1292
 - Assigned to ATP (60 percent) –775
 - Assigned to group therapy (40 percent)-517
- Costs of rehabilitation will be borne by the county government
- A standard fee will be charged all DUI offenders
- Revenues from the rehabilitation program will flow to the county government.
- Case A: Rehabilitation services will be provided as a part of the community-supported ASAP.
 - Standard rehabilitation fee-\$0

Costs:

(Eq. IV-14) Educational School = (1292 + 862) (25) = \$53,850ATP = (862 + 775) (65) = \$106,405Group Therapy = (517) (90) = \$46,530Total Rehabilitation Costs = \$53,850 + \$106,405 + \$46,530 = \$206,785 3.5-Year Costs = (3) (206,875) = \$620,355

Revenues:

(Eq. IV-15) Total Rehabilitation Revenues = (1292 + 862 + 862 + 775 + 517)(0) = \$03.5-Year Revenues = (3) (0) = \$0

Case B: Under an average cost-effective ASAP, costs of rehabilitation would be shared by offenders and the community.

• Standard rehabilitation fee = \$25

Costs: same as Case A

(Eq. IV-14) Total Rehabilitation Costs = \$206,785 3.5-Year Costs = \$620,355

Revenues:

- (Eq. IV-15) Total Rehabilitation Revenues = (1292 + 862 + 862 + 775 + 517)(25) = \$107,7003.5-Year Revenues = (3) (\$108,125) = \$323,100
- Case C: Maximum cost-effectiveness would be realized when the rehabilitation program was selfsupporting:
 - Standard rehabilitation fee = \$50

Costs: Same as Case A

(Eq. IV-14) Total Rehabilitation Costs = \$206,785 3.5-Year Costs = \$620,355

Revenues:

- (Eq. IV-15) Total Rehabilitation Revenues = (1292 + 862 + 862 + 775 + 517)(50) = \$215,4003.5-Year Costs = (3) (215,550) = \$646,200
 - 5. Summary of Design Phase Simulation

The effects of the different policy decisions and operational estimates made during the determination of ASAP costs and revenues for Case A, Case B, and Case C are summarized in Table 15.

Under the assumptions of Case A, a community-supported ASAP of 3-yr duration with a 6-month start-up period would require a total city commitment of \$1,867,000 (including \$162,000 for start-up funds) with the county providing net additional funds of \$916,000. Over 80 percent of city costs would be for additional law enforcement activities which would result in no additional income. Nearly 64 percent of county expenses would be to provide judicial services, but these costs would be partially offset by fines levied by the courts. Rehabilitation costs would also be the responsibility of the county and would not generate any revenue. Total cost to the community would be \$2,783,000 with two-thirds of the funds provided by city government.

TABLE 15. SUMMARY OF ASAP DESIGN ACTIVITIES

Tem Start-up Annual 3.5 Yr Start-up Annual Case A: Community-Supported ASAP Administration 40,000 90,000 Enforcement Costs 364,420 1,093,260 121,716 478,170 Adjudication Costs (266,000) (798,000) Adjudication Revenues (266,000) (798,000) Rehabilitation Costs 206,785 620,355 \$161,716 \$568,170 \$1 Case B: Average Cost-Effective ASAP 102,840 112,000 90,000 Pation:stration 12,000 90,000 232,848 (112,000) 112,000 0 Adjudication Revenues (107,700) (323,100) (112,000) 0 0 Total (113,625) (340,875) 99,270 <td< th=""><th></th><th>City</th><th></th><th></th><th>County</th><th></th><th colspan="4" rowspan="2">Item</th></td<>		City			County		Item						
Case A: Community-Supported ASAP Administration Enforcement Costs Adjudication Costs 364,420 1,093,260 121,716 478,170 Adjudication Costs 364,420 1,093,260 Adjudication Costs 206,785 620,355 Rehabilitation Revenues 5305,205 \$915,615 \$161,716 \$568,170 \$1 Case B: Average Cost-Effective ASAP Administration 340,480 1,021,440 (112,000) 0 Fnorcement Revenues (107,700) (323,100) (112,000) 0 Rehabilitation Revenues (107,700) (323,100) (112,000) 0 Total (113,625) (340,875) 99,270 210,848 Adjudication Revenues (107,700) (323,100) (112,000) 0 Total (113,625) (340,875) 99,270 210,848	3.5 Yr	Annual	Start-up	3.5 Yr	Annual	Start-up							
Administration	Case A: Community-Supported ASAP												
Enforcement Costs	310,000	90,000	40,000				Administration						
Enforcement Revenues 364,420 1,093,260 Adjudication Costs (266,000) (798,000) 620,355 <td>,556,226</td> <td>478,170</td> <td>121.716</td> <td></td> <td></td> <td></td> <td>Enforcement Costs</td>	,556,226	478,170	121.716				Enforcement Costs						
Adjudication Costs $364,420$ $1,093,260$ Adjudication Revenues $206,785$ $620,355$ Rehabilitation Costs $206,785$ $620,355$ Rehabilitation Revenues $5305,205$ $$915,615$ $$161,716$ $$568,170$ $$1$ Case B: Average Cost-Effective ASAP Administration Inforcement Costs $$340,480$ $1,021,440$ $(112,000)$ 0 Adjudication Revenues $340,480$ $1,021,440$ $(112,000)$ 0 Adjudication Revenues $206,875$ $620,625$ $(112,000)$ 0 Rehabilitation Costs $206,875$ $620,625$ $(232,100)$ $(210,848)$ Total $(113,625)$ $(340,875)$ $99,270$ $210,848$ Case C: Highly Cost-Effective ASAP		-					Enforcement Revenues						
Adjudication Revenues (266,000) (798,000) Rehabilitation Costs 206,785 620,355 Total \$305,205 \$915,615 \$161,716 \$568,170 \$1 Case B: Average Cost-Effective ASAP Administration Patternet Costs $340,480$ $1,021,440$ (112,000) 0 Adjudication Costs $340,480$ $1,021,440$ (112,000) 0 Adjudication Costs $206,875$ $620,625$ (112,000) 0 Rehabilitation Revenues (107,700) $(323,100)$ 99,270 210,848 0 Total (113,625) (340,875) 99,270 210,848 0 Case C: Highly Cost-Effective ASAP (112,000) 0 <td></td> <td></td> <td></td> <td>1,093,260</td> <td>364,420</td> <td></td> <td>Adjudication Costs</td>				1,093,260	364,420		Adjudication Costs						
Rehabilitation Costs 206,785 620,355 <td></td> <td></td> <td></td> <td>(798,000)</td> <td>(266,000)</td> <td></td> <td>Adjudication Revenues</td>				(798,000)	(266,000)		Adjudication Revenues						
Rehabilitation Revenues Total	•			620,355	206,785		Rehabilitation Costs						
Total \$305,205 \$915,615 \$161,716 \$568,170 \$1 Case B: Average Cost-Effective ASAP Administration Inforcement Costs 340,480 1,021,440 012,000 Adjudication Costs 340,480 1,021,440 012,000 00,000 Adjudication Costs 055,3280) 01,059,840) 012,000 00,000 Rehabilitation Costs 206,875 620,625 010,000 010,000 Total 0113,625) 0340,875 99,270 210,848 010,000 Total 0113,625) 0340,875 99,270 210,848 00,000 Case C: Highly Cost-Effective ASAP 010,000 90,000 00,000 01,476 Inforcement Costs 214,540 040,620 040,620 040,620 040,000 90,000 014,620				-			Rehabilitation Revenues						
Case B: Average Cost-Effective ASAP Administration 40,000 90,000 Enforcement Costs 59,270 232,848 Fnforcement Revenues (112,000) 0 Adjudication Costs (553,280) (1,659,840) (112,000) 0 Adjudication Revenues (206,875 620,625 100,875 100,875 0<	,866,226	\$568,170	\$161,716	\$915,615	\$30 5,205		Totał						
Administration 40,000 90,000 Enforcement Costs 340,480 1,021,440 Adjudication Costs (553,280) (1,659,840) Adjudication Revenues (107,700) (323,100) Rehabilitation Revenues (113,625) (340,875) 99,270 210,848 Case C: Highly Cost-Effective ASAP Administration (112,000) 0 Enforcement Revenues (113,625) (340,875) 99,270 210,848		······································	1 <i>SA</i> P	Cost-Effective /	e B: Average	Ca							
Inforcement Costs 340,480 59,270 232,848 Inforcement Revenues 340,480 1,021,440 (112,000) Adjudication Costs (553,280) (1,659,840) (112,000) (112,000) Rehabilitation Costs 206,875 620,625 (112,000) (113,625) Total (107,700) (323,100) 210,848 Case C: Highly Cost-Effective ASAP (112,000) Administration (112,000) 90,000 Inforcement Revenues (112,000) 90,000 Inforcement Revenues (112,000)	310.000	90,000	40,000				Administration						
Inforcement Revenues 340,480 1,021,440 (112,000) 0 Adjudication Costs (553,280) (1,659,840) (112,000) 0 Rehabilitation Costs (107,700) (323,100) 210,848 Total (113,625) (340,875) 99,270 210,848 Case C: Highly Cost-Effective ASAP Administration (112,000) 0 Enforcement Revenues 216,540 (112,000)	757,814	232,848	59.270				Enforcement Costs						
Adjudication Costs 340,480 1,021,440 Adjudication Revenues (553,280) (1,659,840) Rehabilitation Costs 206,875 620,625 Rehabilitation Revenues (107,700) (323,100) Total (113,625) (340,875) 99,270 210,848 Case C: Highly Cost-Effective ASAP Administration 23,285 91,476 Enforcement Revenues 216,540 (112,000)	336,000)	(112,000)					Inforcement Revenues						
Adjudication Revenues (553,280) (1,659,840) Rehabilitation Costs 206,875 620,625 Rehabilitation Revenues (107,700) (323,100) Total (113,625) (340,875) 99,270 210,848 Case C: Highly Cost-Effective ASAP Administration 23,285 91,476 Enforcement Revenues (112,000)				1,021,440	340,480		Adjudication Costs						
Rehabilitation Costs 206,875 620,625 Rehabilitation Revenues (107,700) (323,100) Total (113,625) (340,875) 99,270 Case C: Highly Cost-Effective ASAP Administration Enforcement Costs 216,540 Administration 216,540 040,620 90,000 Case C: Highly Cost-Effective ASAP 216,540 040,620				(1.659.840)	(553.280)		Adjudication Revenues						
Rehabilitation Revenues (107,700) (323,100) 99,270 210,848 Total (113,625) (340,875) 99,270 210,848 Case C: Highly Cost-Effective ASAP Administration 40,000 90,000 Enforcement Costs 214,540 040,620 (112,000)				620,625	206,875		Rehabilitation Costs						
Total (113,625) (340,875) 99,270 210,848 Case C: Highly Cost-Effective ASAP Administration 40,000 90,000 23,285 91,476 Enforcement Revenues 214,540 040,620 (112,000)				(323,100)	(107,700)		Rehabilitation Revenues						
Case C: Highly Cost-Effective ASAP Administration 40,000 90,000 Enforcement Costs 23,285 91,476 Enforcement Revenues 214,540 040,620	731,814	210,848	99,270	(340,875)	(113,625)		Total						
Administration 40,000 90,000 Inforcement Costs 23,285 91,476 Enforcement Revenues (112,000)		L	SAP	Cost-Effective A	use C: Highly (('a							
Enforcement Costs Enforcement Revenues Admitistrative Costs 23,285 91,476 (112,000)	310.000	90,000	40.000				Administration						
Enforcement Revenues (112,000)	297.713	91.476	23.285				Enforcement Costs						
	336,000)	(112,000)					Enforcement Revenues						
Adjudication cosis I ••• I (16.540 949.620)	-,			949.620	316.540		Adjudication Costs						
Adjudication Revenues (792,680) (2,378,040)				(2,378,040)	(792,680)		Adjudication Revenues						
Rehabilitation Costs 206.875 620.625				620.625	206,875		Rehabilitation Costs						
Rehabilitation Revenues (215,400) (646,200)				(646,200)	(215.400)		Rehabilitation Revenues						
Total (484.665) (1.453.995) 63.285 169.476	271.713)	169,476	63.285	(1.453.995)	(484,665)		Total						

The average cost-effective ASAP presented in Case B would result in a net cost to the community of approximately \$390,000. However, due to the different functions performed by the city and county governments, the city would have net annual costs of \$211,000 (plus start-up costs of \$99,000) while the county would realize net revenues of \$114,000 per year from court fines and rehabilitation fees. This inequity in costs and revenues could possibly be reduced by altering the responsibilities of the two governmental entities or through some other agreed-upon funding and revenue sharing arrangement between the city and county governments.

The highly cost-effective ASAP considered in Case C results in net revenues of \$1,182,000 to the combined city and county governments. Under the policy decisions presented, the county would receive net revenues of over \$484,000 annually, with the city government realizing net annual costs of \$70,000 (plus \$63,000 in start-up costs). Again, better balance in revenues between the city and county may be achieved through re-assignment of responsibilities or other local arrangements between the involved governmental entities.

6. Costs to DUI Offenders

In addition to the various fines and fees levied against the DUI offender under the policies and assumptions of the three cases considered in the simulation, there are certain other costs which the offender will generally be required to pay. These nonpolicy-related costs include towing fees, bailbondsmen fees, and attorney fees. In many of the cities having on-going ASAP's, it is the policy of the law enforcement agency involved to have the vehicle of DWI offenders towed to a central impoundment area if there is not a second nonimpaired person available to move the vehicle. Towing and impoundment charges are then levied against the driver. In those cities evaluated which follow a towing policy, fees range from \$10 to \$25 plus storage charges. A fee of \$25 is assumed for this analysis.

Bonds required of DUI offenders generally range from \$125 to \$500 in those cities which require bonds for release from jail. Bondsmen fees for those unable to meet the stated bond varies from 10 to 15 percent of the bond value. Bonds required in the cities studied average approximately \$300; bondsmen fees average \$30.

Attorney fees for DUI cases vary greatly from area to area and are also dependent on the number of court appearances required for each case. Average fees in the cities evaluated ranged from \$300 to more than \$500 per case, with an overall average of \$450.

TABLE 16. SUMMARY OF OVERALL DUI OFFENDER COSTS

Cost Source	Case A	Case B	Case C
Policy-Related Costs			
Traffic Violation Fine	0	10	20
Court Fine-DUI	50	75	100
PS1 Fee	0	10	10
Probation Fee	0	20	40
Rehabilitation Fee	0	25	50
Sub-Totai	\$ 50	\$140	\$220
Nonpolicy-Related Costs			
Towing Fee	25	25	25
Bondsmen Fee	30	30	30
Attorney Fee	450	450	450
Total	\$555	\$645	\$725

As can be seen from Table 16, the DUI fine and fee policies established for the three cases considered in the simulation resulted in a direct cost of the DUI offender of \$50 to \$220. However, even in Case C where the most severe fines and fees were levied, total policy-related costs amounted to less than 30 percent of the total costs assumed by the drinker-driver arrested for DUI. Even in those cases where all fines and fees are waived, nonpolicy-related costs to the DUI offender average in excess of \$500.

D. Conclusions

The three cases evaluated in this simulation are presented to illustrate how the algorithm developed

in Section IV can be applied during the design of a locally funded ASAP and to show the effect different policy decisions have on the resulting costs and revenues to the community. An ASAP to be effective must be designed to meet local goals and needs and would probably include elements from each of the examples presented. Through proper predesign planning and operational design, a locally funded ASAP can be established which will be essentially self-supporting while providing the community with an effective program which responds to the problem of the impaired drinking-driver.

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The analysis identified workload elements of the system which had direct or indirect costs or direct revenues associated with them, and allocated both cost and revenue to one of six community

TABLE A-1. CATEGORIES OF WORKLOAD ELEMENTS

fable	Workload Category
١.	Impact on Overall Accident Patterns
2.	Impact on Alcohol-Related Accident Patterns
3.	Impact Upon Traffic Safety System
4.	Summary of Voluntary Roadside Surveys
5.	NHTSA Direct Costs for Program Administration
6.	State Government Costs for Program Administration
7.	County Government Costs for Program Administration
8.	City Government Costs for Program Administration
9.	NHTSA Direct Costs for ASAP Enforcement
10.	State Government Costs for ASAP Enforcement
П.	County Government Costs for ASAP Enforcement
12.	City Government Costs for ASAP Enforcement
13.	ASAP DWI Arrest Caseload
14.	ASAP Non-DWI Caseload
15.	Revenue from Non-DWI Arrests
16.	Cost and Revenue from DWI Vehicle Handling
17.	Economic Impact from Bail Bondsmen/Attorneys
18	Economic Impact from Jailing DWIs
19.	NHTSA Direct Costs for Judicial
20.	State Government Costs for Judicial
21.	County Government Costs for Judicial
22.	City Government Costs for Judicial
23.	DWI Adjudication Flows
24.	Attorney Fees Paid by DWI
25.	Other Fees and Fines Paid by DWI
26.	Rehabilitation Client Flows
27.	NHTSA Costs for Rehabilitation
28.	State Government Costs for Rehabilitation
29.	County Government Costs for Rehabilitation
30.	City Government Costs for Rehabilitation
31.	Private Sector Contributions to Rehabilitation
32.	Offender Costs for Rehabilitation

sectors: (1) NHTSA; (2) State government; (3) County government; (4) City government; (5) Offenders; and (6) Defense Attorneys and Bail Bondsmen. Only primary costs and revenues were considered in the analysis. All financial data were accumulated on an annual basis for the period 1971-1974; this compilation assumed that all costs and revenues occurred during the year of arrest. All data, particularly where estimates were required, were reported in a "financially conservative" manner. As shown in Table A-1, operational and cost and revenue data were collected for 22 broad categories of workload elements for ten ASAP sites.

In addition, data also were developed on the impact on costs and revenues, assuming that the projects had been locally funded. This permitted elimination of those cost elements which were concerned only with NHTSA reporting and research requirements. Further, other policy actions were hypothesized which would have enhanced the cost effectiveness of specific projects.

Summaries of these financial data are presented in Tables A-2 through A-11 for each of the four major program elements (administration, enforcement, adjudication, and rehabilitation) and for total and net costs and revenues. Complete reports from each of the ten sites, together with

the "Data Acquisition Forms and Instructions for Summarization of ASAP Results," are on file at the Office of Driver and Pedestrian Programs, National Highway Traffic Safety Administration, Washington, D.C.

TABLE A-2. OVERALL ECONOMIC IMPACT, NEW HAMPSHIRE ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	(528)	 (731)	(31)	(95)	_ (1385)	 (1385)	NHTSA	Revenue Cost						
State	Revenue Cost	(58)	 (152)	2366 (184)	(22)	2366 (416)	1950 	State	Revenue Cost	(117)	(100)	2366 (30)	-	2366 (247)	2119
County	Revenue Cost				-			County	Revenue Cost						
City	Revenue Cost		- (63)		-	 (63)	(63)	City	Revenue Cost		1 1	1	1 1	-	
DWI	Revenue Cost		(201)	 (2935)	-	(3136)	(3136)	DWI	Revenue Cost	-	(201)	 (2935)	-	(3136)	(31 36)
Attorneys & Bondsmen	Revenue Cost		201	747		948 —	948 	Attomeys & Bondsmen	Revenue Cost		201 —	747	_	948 —	9 4 8

TABLE A-3. OVERALL ECONOMIC IMPACT, SOUTH DAKOTA ALCOHOL SAFETY ACTION PROGRAM

(Thousands of Dollars)

		NHTSA-Fu	nded, 1971	1-1974			Hypothesized Locally Funded							:	
Sector	Sector Revenue Program Enforce- or Cost Administration ment Judicial Rehabil- itation Total Net								Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	 (809)	(513)	(510)		_ (1832)	 (1832)	NHTSA	Revenue Cost				-		
State	Revenue Cost		(421)	110 (23)	- (44)	110 (488)	(378)	State	Revenue Cost	(449)	(426)	110 (533)	- (44)	110 (1452)	(1342
County	Revenue Cost		(27)	803 (117)	3 (22)	806 (166)	640 —	County	Revenue Cost		(27)	803 (117)	3 (22)	806 (166)	640
City	Revenue Cost		-	. 848 (93)	-	848 (93)	755	City	Revenue Cost		(402)	848 (93)	-	848 (495)	353
DWI	Revenue Cost		(181)	(2271)	(52)	_ (2504)	(2504)	DWI	Revenue Cost		(181)	(2271)	(52)	_ (2504)	(250
Attorneys & Bondsmen	Revenue Cost			1135		1135	1135	Attomeys & Bondsmen	Revenue Cost			1135		1135	113

A-2

TABLE A-4. OVERALL ECONOMIC IMPACT, FAIRFAX ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	 (776)	(1023)	 (575)	 (269)	(2643)	(2643)	NHTSA	Revenue Cost						
State	Revenue Cost	(10)	(3)	(51)	(313)	(377)	 (377)	State	Revenue Cost			(50)	(200)	(250)	(250)
County	Revenue Cost	(2)	(28)	726 (48)		726 (78)	648 	County	Revenue Cost	(522)	 (393)	1401 (565)	(242)	1401 (1722)	(321)
City	Revenue Cost		(2)	75 (1)		75 (3)	72	City	Revenue Cost	(3)	(366)	 (57)	(27)	150 (453)	(303)
DWI	Revenue Cost		 (587)	 (801)	(385)	(1773)	 (1773)	DWI	Revenue Cost		(587)	(1551)	 (697)	(2835)	(2835)
Attorneys & Bondsmen	Revenue Cost		327			327	327	Attorneys & Bondsmen	Revenue Cost		327		-	327	327

TABLE A-5. OVERALL ECONOMIC IMPACT. HENNEPIN ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

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Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	 (954)	(654)	 (345)	(162)	(2115)	(2115)	NHTSA	Revenue Cost						
State	Revenue Cost					-		State	Revenue Cost		 (54)			- (54)	 (54)
County	Revenue Cost		65 	(313)	-	65 (313)	(248)	County	Revenue Cost		65 (150)	 (658)	(162)	65 (1447)	 (1382)
City	Revenue Cost		100	2424 (668)		2524 (668)	1856	City	Revenue Cost		100 (350)	2424 (668)		2524 (1018)	1506 —
DWI	Revenue Cost		 (434)	(7411)		 (7845)	 (7845)	DWI	Revenue Cost		(434)	 (7411)		(7845)	 (7845)
Attorneys & Bondsmen	Revenue Cost		 	4987 		4987	4987 	Attorneys & Bondsmen	Revenue Cost	· · · · · ·		4987 		4987 —	4987

and the state of the second

TABLE A-6. OVERALL ECONOMIC IMPACT, PHOENIX ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	(712)	 (522)	 (638)	 (347)	_ (2219)	 (2219)	NHTSA	Revenue Cost						
State	Revenue			52	215	267	94	State	Revenue			36	-	36	36
	Cost	·	(37)		(136)	(173)			Cost	·			_	-	-
County	Revenue		-		-	-		County	Revenue				_	-	
	Cost					-			Cost	-		l - 1	-	-	_
City	Revenue		42	592	-	634	—	City	Revenue		60	574	179	813	_
	Cost	(24)	(282)	(541)	(29)	(876)	(242)		Cost	(320)	(665)	(79)	(132)	(1196)	(383)
DWI	Revenue			-	-	_		DWI	Revenue				_	-	_
	Cost		(62)	(1901)	(215)	(2178)	(2178)		Cost	-	(80)	(1405)	(179)	(1664)	(1664)
Attomeys	Revenue	-	20	1257	1	1277	1277	Attomeys	Revenue	-	20	795	_	815	815
& Bondsmen	Cost					-	·	& Bondsmen	Cost		-				-

TABLE A-7. OVERALL ECONOMIC IMPACT, TAMPA ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

1.

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total -	Net
NHTSA	Revenue Cost	 (1079)	(820)	 (166)	(107)	(2172)	 (2172)	NHTSA	Revenue Cost						
State	Revenue		-			_		State	Revenue			—		-	-
	Cost	(40)	(31)	(49)	(96)	(216)	(216)	i	Cosi	(40)	(31)	(49)	-	(120)	(120)
County	Revenue			115	-	115	115	County	Revenue			115	-	115	-
	Cost				-	<u> </u>	·		Cost	(75)		(166)	—	(241)	(126)
City	Revenue	·	178	267	_	445	431	City	Revenue		178	267	-	445	
	Cost	'		(14)		(14).	<u> </u>		Cost	— ·.	(820)	(14)	-	(834)	(389)
DWI	Revenue					<u> </u>		DWI	Revenue	·			—	-	-
	Cost		(1911)	(809)	(784)	(3504)	(3504)		Cost	<u> </u>	(1911)	(809)	(987)	(3707)	(3707)
Attomeys	Revenue		884	427		1311	1311	Attomeys	Revenue		884	427	-	1311	1311
& Bondsmen	Cost				-	-	-	& Bondsmen	Cost	-			-	- 1	_

TABLE A-8. OVERALL ECONOMIC IMPACT. KANSAS CITY ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	(893)	(386)	(452)	(376)			NHTSA	Revenue Cost						
State	Revenue Cost				_	-		State	Revenue Cost			-	_	-	
County	Revenue Cost					-		County	Revenue Cost		_		-	-	
City	Revenue Cost	 (44)	212 (139)	940 (135)	(7)	1152 (325)	827 	City	Revenue Cost	(273)	212 (470)	1410 (628)	_	1622 (1371)	251 -
DWI	Revenue Cost		 (433)	 (4764)	(160)	(5357)	 (5357)	DWI	Revenue Cost		(433)	(5234)	(192)	(5859)	(5859)
Attorneys & Bondsmen	Revenue Cost		221	3824		4045	4045	Attorneys & Bondsmen	Revenue Cost		221	3824		4045	4045

TABLE A-9. OVERALL ECONOMIC IMPACT, NEW ORLEANS ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Revenue Program Enforce Rehabil-Enforce Rehabil-Revenue Program Judicial Total Net Sector Judicial Total Net Sector itation or Cost Administration ment itation or Cost Administration ment NHTSA NHTSA Revenue Revenue ---------------(905) (701) (421) (130) (2157) (2157) Cost Cost -----State Revenue State Revenue ----_ -----------------____ ----(100) (300) (200)Cost ----(300)Cost -------------_ -------County ----... County Revenue -----------١ --Revenue ------------___ Cost ----------------Cost ---------------------------502 502 City Revenue 600 600 City Revenue _-----502 _ -------------(600) Cost (600) Cost ---___ ------------------------_--DWI Revenue DWI Revenue ---------------------____ ------------(1934)(1934) Cost (2050)(2050)(2050)Cost ---(1934) ----------------1384 1384 Revenue 1400 1400 1384 Attorneys ----1400 Revenue ---_---------Attomeys ---& Bondsmen Cost _--------------------& Bondsmen Cost -------------------------

Hypothesized Locally Funded

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TABLE A-10. OVERALL ECONOMIC IMPACT, OKLAHOMA CITY ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	(775)	 (1193)	(518)	 (26)	 (2512)	(2512)	NHTSA	Revenue Cost						
State	Revenue Cost	(3)	(23)	 (66)		- (92)	 (92)	State	Revenue Cost			1	-	-	-
County	Revenue Cost				-	-		County	Revenue Cost			-	-	-	_
City	Revenue Cost	(61)	97 (50)	622 (96)	-	· 719 (207)	512	City	Revenue Cost	(354)	195 (864)	1560 (375)	137	1892· (1911)	
DWI	Revenue Cost		(342)	 (3040)			(3382)	DWI	Revenue Cost		(285)	(3960)	(137)	(4382)	(4382)
Attorneys & Bondsmen	Revenue Cost	-	102 	2418 	- `	2520 	2520	Attomeys & Bondsmen	Revenue Cost	 ·	90	2400	-	2490	2490

TABLE A-11. OVERALL ECONOMIC IMPACT, SAN ANTONIO ALCOHOL SAFETY ACTION PROGRAM (Thousands of Dollars)

NHTSA-Funded, 1971-1974

Hypothesized Locally Funded

Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net	Sector	Revenue or Cost	Program Administration	Enforce- ment	Judicial	Rehabil- itation	Total	Net
NHTSA	Revenue Cost	 (708)	 (1009)	(290)	37 (131)	37 (2138)	(2101)	NHTSA	Revenue Cost						
State	Revenue Cost	(1)	67 	 (74)	-	67 (75)	(8)	State	Revenue Cost		67 		 	67 —	67
County	Revenue Cost	(2)	71 (12)	1354 (181)		1425 (195)	1230	County	Revenue Cost	(288)	 (12)	1461 (497)	60 (60)	1521 (857)	664
City	Revenue Cost	 (7)	335 (418)	, <u></u> ,		335 (425)	 (90)	City	Revenue Cost		335 (1275)	503 		838 (1275)	
DWI	Revenue Cost		 (719)	 (3719)	-(37)	 (4475)	 (4475)	DWI	Revenue Cost		(727)	(4329)	(60)	(5116)	
Attomeys & Bondsmen	Revenue Cost		212	2365		2577	2577	Attorneys · & Bondsmen	Revenue Cost		212	2365 —	-	2577 —	25 7 7 —

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APPENDIX B

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TYPICAL JUDICIAL FLOW OF ALCOHOL-RELATED CASES



SCHEMATIC OF TYPICAL MUNICIPAL COURT OF RECORD

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DEFINITION OF JUDICIAL NETWORK NODES

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Node	Title	Description	Node	Title	Description
. 1	Initial Arrest	An alcohol-related traffic artest	27	Call Non-Jury Trial Docket	Defendant's name is called
2	File in District Court	Charges are filed in the state court	28	Bench Warrant Issued	Same as Node 9
3	Decline to File	system Charges are dropped	29	Non-Jury Trial, Pleads Guilty	Defendant pleads guilty after name is called but before trial
4	Call First Arraignment Docket	Name appearing on the arraignment docket is called	30	Non-Jury Trial Continued, Second Docket	Name of defendant whose trial has been postponed is called
5	Arraigned, Lawyer Present, Pleads Not Guilty	The defendant with his attorney pleads not guilty	31	Non-Jury Trial, Pleads Not Guilty	Actual adversary proceeding before a judge
6	Arraignment pro se, Pleads Not Guilty	The defendant, representing himself, pleads not mility	32	Call Sentencing Docket	Defendant's name is called
7	Continued, 2nd Arrainment	Name of defendant whose armignment	33	Sentenced	Defendant is sentenced
	Docket	has been continued is called	34	Sentencing Continued. Second Docket	Name of defendant whose sentencing has been continued is called
o	Not Guilty	pleads guilty	35	Bench Warrant Issued	Same as Node 9
9	Bench Warrant Issued	Defendant does not appear in court when called and a warrant is issued	36	Sentencing Continued. Thurd Docket	Name of defendant whose sentencing has been twice postponed is called
10	Continued, 3rd Amaignment Docket	Name of defendant whose arraignment has been twice continued is called	37	Dismissal or Acquittal	A finding of not guilty or dismissal of charges (sink node)
11	Continued, 4th Armignment Docket	Name of defendant whose arraignment has been continued three times is called	38	Lost Papers	A defendant who appears at arraign- ment but whose name is not on the docket, search for papers
12	No Arrest Made	The defendant is not apprehended on a bench warrant (sink node)	39	Can't Find	Cannot locate charges information and defendant is sent home (sink node)
13	Call Pretrial Docket	Name of individual requesting a pretrial is called	40	Staffing	Conference (judgeprobation) to determine appropriate sentence after
14	Pretrial Continued	Defendant and/or attorney is given another pretrial date	41	Jail/Fine	pre-sentence investigation Defendant is sentenced to jail and, or
15	Pretrial	Plea bargaining conference in the presence of a judge. Appearance on different dockets may be arranged.	100	Prearraignment Hearing	tme Defendants who are unable to post bond are instructed as to their rights
16	Call Disposition Docket	Name of defendant is called	101	Jury Call Dookat	and options prior to arraignment
17	Bench Warrant Issued	Same as Node 9	101	July Can Docket	and asked if they still wish a jury
18	Disposition Continued. Second Docket	Name of defendant whose hearing has been continued is called			trial. Names are placed on various dockets as a result of their decision.
19	Disposition Continued Third Docket	Name of defendant whose hearing has been twice continued is called	102	Jury Call Continuance	Defendants name is placed on a future jury call docket
20	Disposition	Pleas are accepted or names are placed on trial dockets	103	Motion Docket	Defendant's name is called, and his request for a motion hearing is
21	Call Jury Trial Docket	Name of defendant is called			verified
22	Bench Warrant Issued	Same as Node 9	104	Motion Hearing	Adversary proceeding, hearing arguments on the motion
23	Jury Trial, Pleads Guilty	Defendant pleads guilty after he is called but before a trial begins	105	Final Review of Deferred Sentence	Review of the case file of an individual completing probation
24	Jury Trial Continued, Second Docket	Name of defendant whose trial has been continued is called	106	Final Sentencing	Sentencing of the defendant
25	Jury Trial. Pleads Not Guilty	The actual adversary proceeding before a jury	107	Probation Revocation. Sentencing	Hearing arguments and final sentencing of defendants whose
26	Jury Trial Continued, Third Docket	Name of defendant whose trial has been twice postponed is called			prodation has been revoked

been twice postponed is called

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APPENDIX C ASAP PREDESIGN PHASE CHECKLIST

It is recommended that a local Traffic Safety Coordinator make a preliminary assessment of the drunk-driver problem and the need for an ASAP program, together with an assessment of the receptivity of the DWI control structure to an ASAP program, prior to approaching local governing bodies with a request to formally plan a cost-effective ASAP. The following checklist, while less than that required for program planning, is sufficient to determine the need for an ASAP and to assess organizational attitudes within the community toward implementation of the ASAP systems concept.

A. Determination of the Need for an ASAP

There are three sources of data which are available to all Traffic Safety Coordinators to determine the need for an Alcohol Safety Action Project in their community: degree of involvement of alcohol in fatal accidents; historical levels of DWI arrests; and degree of assignment of guilty DWIs to appropriate rehabilitation programs. In addition, provided the local Traffic Safety Coordinator has available the necessary financial resources, it is recommended that a modest Voluntary Roadside Survey be conducted to confirm the indications of the other three sources.

As an initial step in the assessment of the need for an ASAP program in a local community, data should be collected on the blood alcohol concentrations of drivers involved in fatal accidents

over a period of at least three years. The easiest, but least accurate method, is to examine the accident reports for indications of alcohol as a contributing factor to the crash. However, since every ASAP has found gross underreporting, these data must be adjusted by a multiplier to develop a reasonable estimate of the percentage of fatal accidents which were alcohol-related. A second, and much more accurate, method is to assemble data on all drivers involved in a fatal accident who were tested for blood alcohol level. These data will be available from Medical Examiner files for drivers killed and from police arrest records for surviving drivers.

Two relatively simple techniques are available for estimating the magnitude of DWI problem and the need for an ASAP program through examination of DWI arrest data. The first technique involves the calculation of the annual percentage of licensed drivers in the community arrested for DWI. The second technique is the determination of the average BAC for all persons arrested for DWI during each year.

The third method for assessment of the need for an ASAP involves a determination of the degree to which convicted DWIs have been referred to appropriate rehabilitation programs and subjected to pre-sentence investigations. Successful court outcomes are defined as those cases

POLICE ACCIDENT REPORT DATA

Measurement	19	19	19_	Total
No. Fatal Accidents				
No. Reported AR				
Multiplier	×2	×2	×2	× 2
No. Probable AR				
% Probable AR				

CHEMICAL TEST DATA

Measurement	19_	19	19	Total
No. Tested				
No. ≥0.05%				
% Known AR				

DWI ARREST DATA

Measurement	19	19_	19_	Total
No. DWIs Arrested				
No. Licensed Drivers				
% DWI/Lic. Drivers	1			
Average BAC	Γ			

COURT-REFERRAL-REHAB-DATA

Measure	19	19	19	Total
No. Successful Outcomes	1			
% Referred PS1	1			
% Referred School				
17 Referred Treatment	T			

VRS	DA	TA
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Measure	VRS
No. Tested	
No. ≥0.10% BAC	
% >0.10% BAC	

in which the DWI was convicted of the original charge or convicted of a lesser charge on a "plea-down" with the condition that the DWI attend either an alcohol safety school or an alcoholism treatment program. Referrals to PSI are those cases in which a convicted DWI was categorized by scientific test questionnaires or interviews as a social drinker or a problem drinker. To qualify as a school, the classroom sessions should provide at least 8 hours of alcohol-driving instruction and be limited to social drinkers. To qualify as a more comprehensive treatment, sessions should total at least 16 hours and involve either individual or group therapy with only limited attention given to lectures, and should be limited to problem drinkers.

If possible, a Voluntary Roadside Survey should be conducted at high-risk locations (high incidence of

late evening alcohol-related or single vehicle fatal crashes) on a Friday and Saturday night. The survey should be conducted between 9 P.M. and 3 A.M., employ random stop procedures, and use certified chemical test equipment and operators. The survey should result in a sample size of about 240 which, while not adequate for drawing firm statistical conclusions, is sufficient to estimate the magnitude of the DWI problem in a local community.

These eight factors (% Probable AR Fatal Accidents, % Known AR Fatal Accidents, % of Licensed Drivers Arrested for DWI, Average BAC of DWIs Arrested, % Referred PSI, % Referred School, % Referred Treatment, and % VRS $\geq 0.10\%$ BAC) are sufficient to broadly classify the magnitude of the DWI problem and the need for an ASAP program in a local community. Each factor should be plotted on the scale below, which has been developed from data derived from the federally-funded ASAPs.

Factor		Low ASAP Need	Mo A N	derate SAP leed	High ASAP Need	Very AS Ne	High AP ed
	L		L-	l			
77 Probable AR	0	10	20	30	40	50	≥60
% Known AR	0	10	20	30	40	50	≥60
% DWI/Lic. Dr.	6	5	4	3	2	1	0
% Average BAC	≼0 .16	0.17	0.18	0.19	0.20	0.21	0.22
% Referred PSI	60	50	40	30	20	10	0
% Referred School	60	50	40	30	20	10	0
77 Referred Treat.	60	50	40	30	20	10	0
% VRS ≥0.10%	0	2	. 4	6	8	10	≥12

B. Assessment of Community Receptivity to the ASAP Concept

Once a need for an ASAP has been established, but prior to making the need known to community officials, it is recommended that an assessment be made of community receptivity to the ASAP concept through face-to-face meetings with the following officials:

- Chief of police
- District attorney

- Judges
- Directors, rehabilitation agencies
- Director, local safety council
- Director, alcoholism council

These officials should be briefed on the results of the assessment of the need for an ASAP and on the general ASAP concept.

"Alcohol Safety Action Projects are community-oriented programs designed to increase the efficiency and effectiveness with which the community responds to the drinking-driving problem. Through the application of a "systems" approach, ASAP's act as an organizing and coordinating agency to provide improved faw enforcement, prosecution, adjudication, and rehabilitation through the development of an integrated program aimed specifically at reducing the incidence of drunk driving. The ASAP approach, developed through federally funded research and demonstration programs conducted in a number of cities over a period of several years, provides methods for developing and improving activities in the following areas:

- Law Enforcement. ASAP's cooperate with local law enforcement agencies in assisting them to develop improved techniques for detecting, apprehending, and processing probable DWI offenders so that these drivers can be more efficiently removed from the community's streets and highways.
- Pre-Sentence Investigation. Through the research conducted, ASAP's have developed methods of evaluating the individual DWI offender to determine the severity of his drinking problem. The findings and recommendations of this investigation are provided to the prosecutors and courts to assist them in determining proper disposition of each case.
- Adjudication. Through the cooperation of the courts, ASAP's develop improved methods of handling and disposing of DWI cases. As a result of the pre-sentence investigation, ASAP's recommend appropriate alcohol education or rehabilitation for the individual offender, and enlist the courts' cooperation in referring the offender to these programs as a part of his penalty in addition to traditional court sanctions.
- Alcohol Education and Rehabilitation. ASAP's work in cooperation with probation offices and rehabilitation agencies to develop and improve alcohol education and rehabilitation programs in the community. Experience gained in other ASAP's provides guidance in developing programs tailored to the specific needs of the community.
- Public Information and Education. ASAP's strive to increase public awareness of the drinking-driver problem through meetings, seminars, and public information campaigns.

ASAP is a method of developing a cooperative program involving local law enforcement, prosecution, judicial, and health care agencies aimed at reducing a specific community problem. The ASAP systems approach developed through the federally funded research conducted over the past veral years has resulted in a program which can be applied at the local level by concerned local officials and tailored to deal with the specific drinking-driving problems of the community.

0	How significant do you believe the problem of the drunk-driver to be in your community?	Very Significant Moderate No Problem	
9	What is your attitude towards increasing substantially the DWI arrest rates?	Favor Neutral Oppose	
•	What is your attitude towards pre-sentence investigations forconvicted DWIs?	Favor Neutral Oppose	
•	What is your attitude toward judicial acceptance of PSI recommendations?	Favor Neutral Oppose	
•	What is your attitude toward rehabilitating convicted DWIs, in addition to imposing traditional sanctions of fine and jail?	Favor Neutral Oppose	

С. Clearance for Development of a Detailed Predesign for a Local Community ASAP

In obtaining clearance to begin detailed planning for an ASAP, three elements should be stressed:

Need for the ASAP 0

- Community Receptivity to an ASAP •
- Ø A cost-effective ASAP can be designed which will not cost the local taxpayers any money; many policy decisions will be necessary and community officials will be consulted as the planning progresses.

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