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## Evaluation of Metro Area Carpooling in Omaha, NE

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EVALUATION  
OF  
METRO AREA CARPOOLING  
IN  
OMAHA, NEBRASKA

by

Michael T. Eskey



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## INTRODUCTION

The rising cost of transportation has become a major concern to Americans at every level of the economic ladder. Indeed, recent price hikes in gasoline have affected practically all other products. An optimistic America has watched the per-gallon price of gasoline rise by 400 percent in the last decade and now helplessly looks to the future \$2.00 per-gallon fuel. The facts speak for themselves. We cannot stop the rising cost of transportation; we must cope with the rising cost of transportation.

A look toward the future reveals a rather gloomy forecast. The Office of Energy Programs (1977:1)<sup>1</sup> points out that the current demand for petroleum is almost twice as great as current domestic production. World production rates of recoverable oil and natural gas are expected to decline and the United States' production rates are already in a state of decline. Thus, the United States' dependence on foreign sources of energy is presently increasing, as is our vulnerability to supply interruption and the use of threat of such interruption as a political weapon.

Part of the major policy implications and issues emerging from the energy forecast focuses directly on automobile usage. As available supplies of oil and gas decline, greater pressure will be exerted on the transportation sector to phase in non-petroleum burning vehicles. One forecast states that 15 - 20 percent of all automobiles in the next 20 years will be non-gasoline burning. However, if the technology for producing such vehicles is not available by the late 1980's, basic decisions will have to be made regarding alternate modes of transportation for the car-using public. One such alternative is that of carpooling. This idea is being promoted in Omaha and has formally been in existence since 1974.

The purpose of this report is to provide an evaluation of the Metro Area Carpool: (MAC) Program currently funded by Metro Area Transit (MAT). Some background leading to the present situation is desirable. In 1974, the Federal Highway Administration awarded a grant to the Nebraska Department

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<sup>1</sup> Office of Energy Programs, Forecast of Likely U.S. Energy Supply/Demand Balances for 1985 and 2000 and Implications for U.S. Energy Policy, Springfield, VA.: National Technical Information Service, 1977.

of Roads,<sup>2</sup> which in turn channeled funds to the City of Omaha. Metro Area Transit received about \$100,000 per year in funding for the purpose of establishing a carpooling program.<sup>3</sup> On June 30, 1978 these funds were allocated to city street repairs. Metro Area Transit presently funds the Metro Area Carpool Program. The working budget has decreased from approximately \$100,000 to \$20,000 annually. Certain cutbacks have been made as a result. These include 1) reduction in salaried staff from four to three; 2) elimination of the use of computer matchup (This is now performed by hand, taking man-hours instead of computer time and expense.); 3) elimination of paid advertising on radio and television (Reliance for advertising is now strictly on public service advertising. This has not been as productive in time slots allotted or amounts of time received compared to allotments received when MAC paid for such advertising); and 4) cutback on promotions done in companies (More reliance is now placed on companies to provide promotions. Some service is still provided on request but not to the extent that it was in the past). Also, service to companies is now of a consulting nature, whereas in the past such services as information brochures and advertising were provided. Overall, the shift in funding has severely constrained MAC operations. Recommendations on these and other issues will be dealt with in the report.

In this report the focus will be upon the rationale for, the methods used in, and some findings from the Metro Area Carpool Program. Analysis completed thus far include: those examining opinions and attitudes of respondents about the concept of carpooling and the effectiveness of MAC; attitudes about the expenditure of public funds and/or MAT funds for promotion of carpooling in Omaha; basic demographic data useful for comparing carpoolers with non-carpoolers; and an attempt to evaluate the current situation and the projected future. The report is by no means all-inclusive; it does, however, pinpoint the issues. The variables reported were selected, for the most part, from interviews with representatives from Metro Area Carpool and intensive consultation with members of the Center for Applied Urban Research staff.

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<sup>2</sup> Grant received from Nebraska Department of Roads was Project Number M-8041-38 made available through the Emergency Highway Energy Conservation Act, Public Law 93-239.

<sup>3</sup> The grant was reapplied for on a yearly basis for the amount of \$100,000 per year.

The scope of the Metro Area Carpool Study has meant that, given time for coding, processing, and verification, about two weeks has been available for initial data analysis. The omissions noted, therefore, are planned omissions and reflect the authors' best judgment of initial findings that would be of most interest in this report. To make clear the analyses of the outcomes that are reported, the rationale for the study and the methods used are described first.

#### Rationale

Metro Area Transit received its first Federal grant for the purpose of promoting a carpooling program in Omaha in 1974. A major concern in utilizing the funds focused on energy conservation. Metro Area Transit established Metro Area Carpool (MAC) to promote the concept of carpooling throughout the City of Omaha by advertising, match-ups, informational services, and promotional programs. When the Federal funding terminated in 1978, MAT incurred the expense of continuing the program. The program is still operating within about 20 percent of the past annual budget, and immediate plans are for continuance. When faced with projections of rising transportation costs versus the effectiveness of a program aimed at carpooling, MAT officials determined that an evaluation focusing on the utility of the operating carpool program (MAC) was needed.

In making future decisions about continuance of funding the Metro Area Carpool effort, the MAT administrators wanted to broaden the base of information available to them. They were particularly interested in four major issues concerning the effectiveness of the program: (1) response by MAC to requests for carpooling assistance and subsequent formation of carpools, (2) individuals' ratings of MAC services to them as a commuter, (3) individuals' opinions of supporting the MAC program by MAT or public funds, and (4) individuals' motives for using the Metro Area Carpool services. In February, 1980 CAUR staff began discussions with MAC representatives concerned with an evaluation of the MAC program. The intent was to work toward the design and implementation of a study that would broaden the information base by providing data about individuals who had expressed interest in carpooling and the subsequent utilization or non-utilization of carpooling.

Consideration of the issues suggested a focus in the evaluation effort,

not only upon direct response to specific questions dealing with the issues, but also upon certain demographic information used to present a clear picture of carpool formations. Does the annual family income of individuals vary between carpoolers and noncarpoolers? Do the working hours vary between these two groups? What are the major reasons expressed for or against carpooling? The Metro Area Carpool Evaluation Project was designed to consider these and other related questions.

The CAUR staff became interested, not only in how respondents reported feeling about carpooling and the MAC effort, but also the extent to which such opinions could be explained by several related factors; for example, income, work schedules, and availability of carpoolers. The contribution of transportation and energy conservation policy matters of this and similar studies may rest less upon providing information about the issues in question than upon providing information about the relationships which seem to contribute to or hinder carpooling. If, for example, a negative opinion about MAC is formed among individuals with unusual working hours in hard-to-match job locations, MAC administrators may feel less responsible than they would if negative results are reported by individuals who work normal hours (8 to 5), live in central locations, and work downtown. The questions raised are difficult and require complex analyses beyond those having to do with results from a small random sample. Owing to time limitations, the present report will focus on the major issues. However, plans for future evaluation and analyses should already be underway.

#### Methods

The questions above were pursued through a design that focused on the responses of a select random sample of individuals who had expressed an interest in carpooling. Before detailing the procedures utilized, it will be helpful to describe the overall population drawn from and the sample represented.

The overall population consisted of approximately 4,350 names of individuals who had requested carpool information since July of 1977. Since the onset of the original program, approximately 7,000 individuals requested information about carpooling. This file is periodically updated, and names are eliminated from the list. Thus, the present file represents individuals that have contacted MAC since 1977.

The overall evaluation effort required the construction of two questionnaires: one, an informational index used by Metro Area Carpool and the Metro Area Carpool Questionnaire devised by the CAUR staff. Primary responsibility for furnishing the file of individuals in the overall population lay with Metro Area Transit. Primary responsibility for generating a representative sample and obtaining needed information lay with the staff from the Center for Applied Urban Research.

The informational index designed by Metro Area Carpool was primarily used to obtain information about individuals' present carpool status and transportation preferences. Further, the index provided MAC officials with matching information, effect-of-advertising information, and the general sources from which respondents were being drawn. In addition, demographic information was gathered: employment address, home address, working hours, telephone number, sex, and date of entry into the system. This information provided MAC officials with the data base needed to match prospects with others having similar working hours, work locations, and home locations.

The Metro Area Carpool Questionnaire was designed to focus on the four central issues previously defined and other background attitudinal information. In addition, respondents were asked to provide some basic demographic information in order to pinpoint characteristics which might have differing effects on carpoolers or non-carpoolers. For example, it was thought to be important to determine if carpooling interests of different income classes are the same. Of some interest to the evaluation effort was the construction, from responses to this instrument, of indices of carpoolers' versus non-carpoolers' attitudes and responses to the major issues.

The instruments were administered at different times. The informational index was obtained from individuals at the time they made inquiry about the program. This was updated when the individual revealed a change in status; e.g., work hours, job location, residence, etc. The Metro Area Carpool Questionnaire was administered during the week of March 10, 1980 to a random sampling of 300 individuals who had requested information about the program. The method of probability sampling employed is referred to as systematic sampling. Here the first sample element is randomly chosen from number 1 through the sampling fraction needed. Subsequent elements are



chosen, then, according to this sampling fraction. For example, in the sample 593 names were drawn from the 4,376 available names. The sampling fraction revealed that every seventh name must be chosen. The first number was chosen by utilizing a random numbers table; then every seventh name was subsequently drawn. The deck of names was then shuffled to insure that the original names, drawn alphabetically, would now be placed in a random order to insure that all respondents used had an equal chance of being chosen.

The Metro Area Carpool Questionnaire was administered by use of a telephone survey. Respondents were contacted either at home or their place of employment. The names provided by Metro Area Carpool proved to be out of date in many instances; in fact, 251 or 42.3 percent were unusable due to employment change or unlisted telephone numbers. Updates were required for several of the individual work and home addresses, telephone numbers, and working numbers of respondents used in the study. These updates will provide Metro Area Carpool with information on the specific respondents contacted and with an estimate of the percentage of individuals that need to be updated in the current file. The current data may also prove useful for any future evaluation efforts.

Responses to both instruments were coded and keypunched for computer processing and analysis. Given that the time for data collection was limited, and given the time necessary for coding, keypunching, and verification, analyses will focus primarily on the major issues. Secondary emphasis will be placed on comparison of carpoolers and non-carpooling.

The main technique utilized in reporting results below was that of percentage tables. These reveal the raw frequencies (recoded when necessary) of the recorded responses. In reporting direct carpooler versus non-carpooler differences, the "five percent level" of statistical significance was utilized. That is, differences reported between these groups might occur by chance five times out of one hundred. It should be noted that any differences are not necessarily of sufficient magnitude to warrant policy changes.

In summary, it is important to remember that the results that follow are based upon a "natural experiment" in a sample made up totally of individuals who had requested information from Metro Area Carpool. The findings are not based upon a tightly controlled experiment ranging across

an entire population. The information gained from this evaluation is valid for the population in question. The study cannot and should not be used to alter policy without giving serious consideration to limitations that will be stressed throughout this report.

## EVALUATION OF THE ISSUES

In this part of the report, the responses to the questions dealing with the four major issues will be presented; first, response rates of MAC to requests for carpooling assistance and subsequent carpool formation; second, the ratings of MAC services; third, respondents' views on the source of funding Metro Area Carpool; and fourth, individual motives expressed by respondents for utilizing or not utilizing carpooling.

### MAC Response

Respondents were asked to give information on whether they had received a list from Metro Area Carpool, the speed of the response, the number of names on the list, and usage of the list in joining or organizing a carpool. The crucial factors were the number of names received and the accessibility of those names for subsequent formation of a carpool. Naturally, those who received either no response or a response with no list did not form a carpool through Metro Area Carpool. Table 1 reveals the response of MAC to requests for information about intended carpool matches. The data reflect the formation of a carpool by the nature of response by MAC, and Table 2 reflects the formation of a carpool by the number of names received.

The majority of respondents, 80 percent, received a response from MAC, and 62.9 percent of the respondents received a list with at least one name of someone in their area who wanted to carpool. Table 1 further reveals that 12.8 percent of those who received a list formed a carpool as a result. Another 28.2 percent tried to form or organize a carpool with the list they had received, while 59.1 percent did not attempt to form carpools after receiving a list from MAC. Only a response but no list of names was received by 17.1 percent, and 20 percent did not receive a response.

Table 2 reflects only the responses of individuals who received a list and could recall how many names were on the list. It was found that 21.3 percent of those receiving five or more names used the list to form a carpool, and

another 27.9 percent in this category made an attempt to form a carpool. The formation of a carpool by respondents receiving one or two names and three or four names was about equal. Only 6.6 percent of the sample were included in this tabulation. Indeed, 17.4 percent received a response but no list, 20 percent did not receive a response from MAC, and 8.4 percent could not recall how many names they had received. More than twice as many carpools were formed by respondents who received five or more names than by individuals who received fewer than five names.

For those respondents who did receive a response and who could recall the time it took them to receive the response, the majority, 64.7 percent, received a response within seven days, another 23.7 percent received a response in 8 to 14 days. Some respondents, 17.1 percent, could not recall how long the response from MAC took, and 20 percent did not receive a response. The table shows some evidence that individuals who received a response within seven days were more likely to form a carpool or at least attempt to form a carpool than were those who received a response after a longer period had elapsed.

#### Discussion

The preceding tables provide inconclusive findings. Overall, 24.4 percent of the respondents formed or made an attempt to form a carpool with the list they received from MAC. Since of the individuals who received a response from MAC 41 percent formed or attempted to form a carpool, one could conclude that the program was generating effects. Further, 49.2 percent of the individuals who received five or more names from MAC formed or attempted to form a carpool.

Many reasons were given why a carpool could not be formed. Among those most commonly cited by respondents were working hour conflicts, out-of-date lists, and the match-up of individuals who wanted to ride with other individuals who wanted only to ride and not drive. In some instances, a compromise was reached. In other instances, both parties had neither a car nor access to a car. Nearly two-fifths (38.7 percent) of the respondents indicated on the informational index that they were primarily interested in riding only. With this type of constraint, it seems appropriate for MAC to provide a minimum of four names to insure that one of these could be used to match up a driver with a rider. About 37 percent of the entire sample used received four or more names.

**TABLE 1**  
**MAC RESPONSE BY FORMATION OF CARPOOL**

Carpool Formation	Received List		Did Not Receive Response		Received Response, But No List		Total	
	No.	%	No.	%	No.	%	No.	%
Formed Carpool	24	8.0	0	0.0	0	0.0	24	8.0
Did Not Form Carpool	111	37.1	60	20.0	51	17.1	222	74.2
Tried to Form— No Carpool Formed	53	17.7	0	0.0	0	0.0	53	17.8
<b>TOTAL</b>	<b>188</b>	<b>62.9</b>	<b>60</b>	<b>20.0</b>	<b>51</b>	<b>17.1</b>	<b>299</b>	<b>100.0</b>

Carpool Formation	One-two Names		Three-four Names		Five or more Names		Total	
	No.	%	No.	%	No.	%	No.	%
Formed Carpool	6	3.6	5	3.0	13	7.9	24	14.5
Did Not Form Carpool	33	20.0	28	17.0	31	18.8	92	55.8
Tried to Form— No Carpool Formed	14	8.5	18	10.9	17	10.3	49	29.7
<b>TOTAL</b>	<b>53</b>	<b>32.1</b>	<b>51</b>	<b>30.9</b>	<b>61</b>	<b>37.0</b>	<b>165</b>	<b>100.0</b>

Note: The table represents only individuals who received at least one name on their list from MAC. 20% of the total sample did not receive a response. 17.1% received a response, but no list. And, 8.4% did not recall how many names were on the list received.

Carpool Formation	One-seven Days		Eight-fourteen Days		Fifteen or more Days		Total	
	No.	%	No.	%	No.	%	No.	%
Formed Carpool	12	8.6	6	4.3	0	0.0	18	12.9
Did Not Form Carpool	53	38.1	17	12.2	13	9.4	83	59.7
Tried to Form— No Carpool Formed	25	18.0	10	7.2	3	2.2	38	27.4
<b>TOTAL</b>	<b>90</b>	<b>64.7</b>	<b>33</b>	<b>23.7</b>	<b>26</b>	<b>11.6</b>	<b>139</b>	<b>100.0</b>

Note: The table represents only individuals who received a list from MAC and could recall how many days it took to receive the response. 17.1% of the overall sample could not recall how many days the response took. 16.8% of the respondents did not receive a list of names from MAC. And, 20% did not receive a response from MAC.

The second reason given for not forming a carpool was that the names were out-dated. That is, the people on the list had either moved, changed employment, changed their working hours, or some other related factor. CAUR interviewers found that 42.3 percent of the random sample drawn could not be contacted due to change of employment or home address. Another 12.3 percent who were contacted had changed employment, moved, or changed their telephone numbers. Since over half the names on the current list are inaccurate for matching purposes, the method for updating or verifying the names might be re-examined.

### Recommendations

The needs of the respondents focused on two major items: 1) the number of names received and 2) the speed of MAC's response. The existing file should be updated to reflect the status of individuals presently in the system. Further, the requests of individuals need to be processed and sent out within a seven-day period. An effort must be made to assure that individuals requesting match-ups be sent at least four names. An extra service could be provided by MAC which would provide periodic updating to insure current files. The mail-in update method presently being utilized could be re-evaluated. Individuals could be contacted personally on a periodic basis to let them know that MAC is still working to match them and to insure that the status information on file is still current.

### MAC Rating

The second major issue deals with the respondents' ratings of the services provided by Metro Area Carpool and their opinions about how they felt these services could be improved. Respondents were also asked to rate the idea of carpooling. Tables 4, 5, and 6 are categorized by present carpooling status of the respondent. Table 7 reveals the respondents' ratings of MAC services by the speed of response received from MAC, and Table 8 shows the respondents' ratings of MAC by the type of response.

The ratings of the carpooling idea are depicted in Table 4. Both carpoolers and non-carpoolers generally rated the idea as at least very good. An interesting comparison can be noted between carpoolers and non-carpoolers rating the idea of carpooling as very good. Of those currently carpooling 75.2 percent rated carpooling in this category compared to 60 percent of those not carpooling. This speaks to the issue of satisfaction derived through participation.

Table 5 depicts the rating of services provided by Metro Area Carpool by present carpooling status. MAC's services were rated as at least good by 74.1 percent of those presently carpooling and 61.5 percent of those not presently carpooling. No sharp contrast occurred in ratings of MAC's services between carpoolers and non-carpoolers as in the rating of the carpooling idea. Contrasts were found between the two tables. Services provided by MAC were rated as poor or very poor by 11.9 percent of the sample compared to only 3.2 percent of the sample rating the idea of carpooling in these categories.

Respondents were asked to disclose how they felt MAC services could be improved. These were divided into five manageable groupings. Again, the respondents were divided into two groups depicting present carpooling status. No marked differences were found between the two groups in these five areas. However, the findings revealed that the respondents felt improvements were needed in several areas. For example, 22.7 percent responded that they would like the name match-up procedure and list-updating procedures improved. Another 14 percent of the sample felt that more promotions and advertising were needed, and 9.2 percent of sample felt that more emphasis must be placed on educating the public and employers, especially in the larger companies. Only 6 percent of the sample did not feel that any improvements were needed in the services presently being provided by MAC.

Table 7 shows the ratings of MAC services by the number of names received from MAC. The numbers of individuals rating MAC services as very good was directly related to the quantities of names those individuals received. Of those receiving five or more names, 31.7 percent rated the services as very good; of those receiving three/four names, 28 percent rated the services as very good; and 24.5 percent of those receiving one or two names rated the services as very good. For those receiving a response but no list of names from MAC, only 15.7 percent rated the services as very good, and 10.5 percent of those who received no response from MAC rated the services as very good.

The speed of MAC's response to requests for information appeared to influence respondents' ratings of the services more than the number of names on the list. The sooner that individuals received a response from MAC, the more likely they were to rate the services higher. Those receiving a response in more than 14 days or no response were more likely than those receiving a faster response to rate the MAC services as poor.



TABLE 4												
RATING OF CARPOOL SIDE BY PRESENT CARPOOL STATUS												
Present Carpool Status	Very Good		Good		Poor		Very Poor		No Comment/ Information		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Presently Carpooling	82	27.3	26	8.7	1	0.9	0	0.0	0	0.0	109	36.3
Not Presently Carpooling	115	38.3	62	20.7	6	2.0	1	0.3	7	2.4	191	63.7
<b>TOTAL</b>	<b>197</b>	<b>65.6</b>	<b>88</b>	<b>29.4</b>	<b>7</b>	<b>2.9</b>	<b>1</b>	<b>0.3</b>	<b>7</b>	<b>2.4</b>	<b>300</b>	<b>100.0</b>

TABLE 5												
RATING OF MAC SERVICES BY PRESENT CARPOOL STATUS												
Present Carpool Status	Very Good		Good		Poor		Very Poor		No Comment/ Information		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Presently Carpooling	21	7.1	59	20.0	10	3.4	2	0.7	16	5.5	108	36.6
Not Presently Carpooling	42	14.2	73	24.7	21	7.1	2	0.7	49	16.6	187	63.4
<b>TOTAL</b>	<b>63</b>	<b>21.3</b>	<b>132</b>	<b>44.7</b>	<b>31</b>	<b>10.5</b>	<b>4</b>	<b>1.4</b>	<b>65</b>	<b>22.4</b>	<b>295</b>	<b>100.0</b>

**TABLE 6**  
**IMPROVEMENTS NEEDED BY MAC BY CARPOOL STATUS**

Present Carpool Status	No Improvements Needed		Name Matching/ Updates		Promotions/ Advertising		Public/ Employer Education		More Public/ Employer Services		Don't Know		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Presently Carpooling	5	2.0	24	9.6	15	6.0	10	4.0	9	3.6	33	13.1	96	38.2
Not Presently Carpooling	10	4.0	33	13.1	20	8.0	13	5.2	8	3.7	71	28.3	155	61.8
<b>TOTAL</b>	<b>15</b>	<b>6.0</b>	<b>57</b>	<b>22.7</b>	<b>35</b>	<b>14.0</b>	<b>23</b>	<b>9.2</b>	<b>17</b>	<b>6.8</b>	<b>104</b>	<b>41.4</b>	<b>251</b>	<b>100.0</b>

Note: 49 individuals, 16.3%, of the original sample, did not respond to this question.

TABLE 7  
RATING OF MAC SERVICES BY NUMBER OF NAMES RECEIVED

Number of Names Received	Very Good		Good		Poor		Very Poor		No Comment/ Information		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Five or More	19	7.0	31	11.4	5	1.8	1	0.3	4	1.5	60	22.1
Three-Four	14	5.2	23	8.5	3	1.1	0	0.0	10	3.7	50	18.5
One-Two	13	4.8	27	10.0	3	1.1	0	0.0	10	0.4	53	19.6
Response- No Names	8	3.0	19	7.0	7	2.6	2	0.7	15	5.5	51	18.8
No Response	6	2.2	18	6.6	9	3.3	0	0.0	12	4.4	57	21.0
<b>TOTAL</b>	<b>60</b>	<b>22.2</b>	<b>118</b>	<b>43.5</b>	<b>28</b>	<b>8.9</b>	<b>3</b>	<b>1.0</b>	<b>51</b>	<b>15.5</b>	<b>271</b>	<b>100.0</b>

Note: 7.8% of the total sample did not recall how many names they had received on their list from MAC. 2.0% had missing data on either of the two questions.

TABLE 8  
RATING OF MAC SERVICES BY SPEED OF MAC RESPONSE

Speed of Response	Very Good		Good		Poor		Very Poor		No Comment/ Information		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One-Seven Days	32	14.1	48	21.1	6	2.6	0	0.0	19	8.4	105	46.3
Eight-Fourteen Days	12	5.3	21	9.3	2	0.9	1	0.4	5	2.2	41	18.1
More than Fourteen Days	4	1.8	13	5.7	3	1.3	0	0.0	4	1.8	24	10.6
No Response	6	2.6	18	7.9	9	4.0	0	0.0	24	10.6	57	25.1
<b>TOTAL</b>	<b>54</b>	<b>23.8</b>	<b>100</b>	<b>44.0</b>	<b>20</b>	<b>8.8</b>	<b>1</b>	<b>0.4</b>	<b>52</b>	<b>23.0</b>	<b>227</b>	<b>100.0</b>

Note: 22.5% of the total sample did not recall how many days it took to receive a response from MAC. 2.3% had missing data on either of the two questions.

## MAC Funding

A third issue of concern to MAC officials was the funding source for continuation of the carpool program. Metro Area Transit is presently funding the Metro Area Carpool Program at about one-fifth of the budget received from Federal funding. Respondents were asked if they felt public funds should be used to support the MAC Program and if they felt that MAT funds should be used to support it.

Table 9 reveals the views of the respondents to the question of using public funds to support MAC. The table is categorized by the present carpooling status of the respondents. Overall, 56 percent of those responding felt that public funds should be used to support the MAC Program. Non-carpoolers responded more often than carpoolers (58.6 percent and 51.4 percent, respectively) that public funds should be used to support MAC.

Respondents were also asked to reveal whether or not they felt MAT should continue the Metro Area Carpool Program. Overall, 61.8 percent of the sample responded that they felt MAT should continue to use its funds to support MAC. No significant difference occurred between carpoolers and non-carpoolers (62.4 percent and 61.5 percent, respectively) holding this view.

### Discussion

A majority of the respondents felt that the funding of the Metro Area Carpool Program should come from either/or both public funds and from Metro Area Transit funds. Certain factors point to the success of Metro Area Carpool. Several individuals have formed carpools as a direct result of MAC services or indirect MAC sources. Respondents presently carpooling generally rated the services provided by MAC as at least good, and those presently carpooling reported that they were saving money and energy, major objectives of the program. Nevertheless, improvements are needed for the program to match its potential.

### Discussion

The above reflect findings about respondent ratings of MAC services which were similar to findings about the issue of MAC response. Respondents tended to rate the service by what it did for them and how fast it did so. Respondents used in the study had previously requested information from MAC concerning carpooling; thus, the finding of 95 percent of the sample

rating the idea of carpooling as at least good was not surprising. The issue then focused on how individuals rated MAC services for carpooling. The respondents were categorized by carpooling status, and the results revealed that those presently carpooling were more likely to rate MAC's services higher. The utility of a simple comparison of carpooling status of the respondents might not be completely justified. Several respondents stated that they received a list of names and did not use it to form a carpool. Thus, a table was devised to reflect a rating of MAC's services by the number of names received. Respondents who received more names were more likely to rate MAC services higher. Similarly, individuals who received faster response from MAC were more likely to rate the services higher.

The ratings of MAC services correlated with the improvements which respondents felt were needed by MAC. Better name matching and updated lists were felt to be the most needed improvements. A need was felt also for improvement in the area of promotions and advertising, education of the public and employers, and the services provided by MAC to the public and large companies.

#### Recommendations

The needs of the individuals must be fulfilled if MAC is to succeed. Since individuals need names to organize carpools, a minimum of four names should be sent to each individual requesting match-up information. Furthermore, MAC needs to confirm that its list have current information about the individuals. CAUR recommends that MAC take the initiative to revitalize the informational, promotional, and educational services needed by the larger companies. MAC presently provides only consulting services on request. A concerted effort is needed to contact all Omaha employers with more than 50 employees and provide them with information necessary for instituting a carpooling program in their companies.

#### Recommendations:

The MAC Program should continue to receive funding from Metro Area Transit. Efforts must continue to obtain outside funding. The Metro Area Carpool currently funded by MAT cannot be expected to provide the services previously supported by Federal funding. The budget is now only one-fifth of that previously used to operate, and, with rising costs, the fraction is even less. The program has tremendous potential and its continuation should be given priority.

TABLE 9 USE OF PUBLIC FUNDS TO SUPPORT MAC BY CARPOOL STATUS								
Carpool Status	Use Public Funds		Do Not Use Public Funds		Do Not Know		Total Total	
	No.	%	No.	%	No.	%	No.	%
Presently Carpooling	55	18.8	43	14.7	9	3.0	107	36.5
Not Presently Carpooling	109	37.2	62	21.2	15	5.1	186	63.5
<b>TOTAL</b>	<b>164</b>	<b>56.0</b>	<b>105</b>	<b>35.9</b>	<b>24</b>	<b>8.1</b>	<b>293</b>	<b>100.0</b>

TABLE 10 CONTINUANCE OF MAT FUNDS TO SUPPORT MAC BY CARPOOL STATUS								
Carpool Status	Continue MAT Funds		Discontinue MAT Funds		Do Not Know		Total	
	No.	%	No.	%	No.	%	No.	%
Presently Carpooling	68	22.7	32	10.7	9	3.0	109	36.5
Not Presently Carpooling	117	39.1	50	16.7	23	7.7	190	63.5
<b>TOTAL</b>	<b>185</b>	<b>61.8</b>	<b>82</b>	<b>27.4</b>	<b>32</b>	<b>10.7</b>	<b>299</b>	<b>100.0</b>

## Motives for Using MAC

Metro Area Carpool officials expressed a need to determine the factors motivating individuals to carpool and those reasons which individuals gave for not carpooling. Further, they wanted to determine how non-carpoolers got to work before they began carpooling. First, the reasons given for carpooling might lend credence to the MAC informational brochure distributed to individuals requesting matchups and carpool information. The reasons individuals gave for not carpooling might serve as starting points for MAC to bolster its efforts in specific areas of service.

The present transportation of non-carpoolers and past transportation of carpoolers is of interest to MAT officials in reviewing the usage of mass transit in Omaha. Those presently riding the bus to work are, like carpoolers, effectively conserving energy. Carpoolers who stopped taking the bus in favor of carpooling may have added convenience to themselves but generally are not conserving more energy. They are, however, keeping with the idea of energy conservation.

Table 11 depicts the reasons given for carpooling by those respondents who were, at the time of the survey, carpooling. The majority of respondents stated that their motives for carpooling were economic-related. Smaller percentages of the respondents also cited driving conditions, such as rush-hour traffic or parking, as influences on their decision to carpool. Another 15.9 percent of the respondents cited a combination of the above reasons for their decision to carpool. Other reasons cited by respondents included no automobile, too cold to walk, poor bus service, convenience, and companionship.

Table 12 depicts the reasons given by respondents for not carpooling at the present time. Of these, 48.1 percent revealed that no others were available to carpool with. Another 30.2 percent gave reasons which were job-related, including unusual working hours, location of employment, and needing their car at work. Reasons related to particular family situations were given by 5.8 percent of the respondents. These included such things as having only one car, the car was needed to take children to school or



TABLE 11		
REASONS FOR PRESENTLY CARPOOLING		
	No.	%
Economic-Related	65	60.7
Driving-Conditions	5	4.7
Parking Problems	8	7.5
Economic-Driving Related	5	4.7
Economic-Parking Related	12	11.2
Other	12	11.2
<b>TOTAL</b>	<b>107</b>	<b>100.0</b>

TABLE 12		
REASONS FOR NOT PRESENTLY CARPOOLING		
	No.	%
Family-Related	11	5.8
Job-Related	57	30.2
No Others Available to Carpool With	91	48.1
Other	26	13.8
Not Working	4	2.1
<b>TOTAL</b>	<b>189</b>	<b>100.0</b>

the babysitter, or the spouse needed the car at work. Other reasons given by 13.8 percent of the sample included convenience and freedom of having the car at work, availability and lower price of using the bus, avoidance of conflicts which might arise from carpooling, and perceived problems with utilizing the bus.

### Discussion

The reasons given for carpooling were expected by the research staff and MAC officials. The reasons given for not carpooling were somewhat surprising. For example, some of the researchers expected a much higher percentage to include freedom issues. Naturally, Metro Area Carpool has no control over family- or employment-related reasons given for not carpooling. However, the large number of individuals who revealed that their reason for presently not carpooling was that no others were available with whom to carpool indicates a need to increase the match probabilities. Overall, 93.9 percent of the entire sample revealed that they worked daytime hours, and 84.4 percent revealed that they would drive at least one mile to form or organize a carpool. If the assumption is made that the sample drawn from is, in fact, truly random, the assumptions may then be made that about 4,100 of the individuals on file are currently working daytime hours, that about 3,600 of those on file would drive at least one mile to form a carpool, and approximately 1,300 of these individuals are not carpooling because they do not have others to carpool with. These 1,300 people are approximately 30 percent of the entire MAC file.

### Recommendations

One area of concern is that the current file needs to be thoroughly updated. This might possibly greatly reduce the number of individuals on file, but the remaining names will be current. The reason that no others were available to carpool with might be a valid response. Many individuals who gave that response also stated that they had received an out-dated list from MAC. The number of respondents who had not received matching help from MAC either by no response, response but no list, or out-dated lists, is large. Until the current file is updated, the effectiveness of MAC will be hampered.

Table 13 depicts the responses by those presently carpooling to the question about their former transportation to work before joining a carpool. The majority, 63.3 percent, stated that they formerly drove alone to work. Another 7.3 percent rode with their spouses or other family members. About 8 percent of the sample reported that they had always carpooled. Eleven percent of the sample stated that they took the bus to work before they began to carpool.

Non-carpoolers were asked how they presently got to work. Their responses are revealed in Table 14. The majority, 69.3 percent, stated that they drove alone. A small percentage, 5.3 percent, revealed that they rode with another family member; however, these individuals also rode the bus on occasion or one-way to or from work. Another 18.5 percent rode the bus, and 6.9 percent walked or rode a bicycle.

#### Discussion

The finding that 63.3 percent of present carpoolers formerly drove alone should be of some satisfaction to MAC officials. Further, the finding that 25.4 percent of those presently not carpooling were getting to work by using either the bus or some form of non-energy-consuming transportation should be equally satisfying. However, 43.7 percent of the entire sample were still driving alone, and many of these were individuals who stated that they did not carpool because no others were available to carpool with.

#### Recommendations

A direct recommendation would be to single out the 131 individuals who stated that they presently drove alone and attempt to match them into a carpool. However, some of these individuals gave specific reasons why they would or could not carpool. Thus, the realistic recommendation is, again, that MAC needs to take the necessary steps to update the current file and then progress toward actively matching individuals.

TABLE 13		
TRANSPORTATION TO WORK BEFORE CARPOOLING		
	No.	%
Bus	12	11.0
Spouse-Other Family Member	8	7.3
Drove Alone	69	63.3
Always Carpooled	10	8.2
Other	10	8.2
TOTAL	109	100.0

TABLE 14		
PRESENT TRANSPORTATION OF NON-CARPOOLERS TO WORK		
	No.	%
Bus	35	18.5
Spouse-Other Family Member	10	5.3
Drive Alone	131	69.3
Walk/Bicycle/Other	13	6.9
TOTAL	189	100.0

## ISSUE RELATED INFORMATION

In this section of the report, consideration is given to information about carpoolers and non-carpoolers. Several factors are at issue for purposes of this evaluation. Metro Area Carpool exists as an informational network for individuals interested in carpooling. Further, it provides a matching service to these individuals. The basis of the match-up is the coordination of individuals having similar home locations, job locations, and working hours. The MAC service attempts to match individuals living and working within a mile of others interested in carpooling contingent, of course, upon these individuals having the same working hours.

The Metro Area Carpool service provides the matching and the information requested by individuals. The service does not attempt to match personalities, nor can it control the use or abuse of the carpool once it has formed. It does provide updated listing for additional riders or formation of new carpools. The updated listing must be requested by the individuals, and MAC cannot maintain updated information on interested individuals without their cooperation.

### MAC Organized Carpools

One of the results hoped for by Metro Area Carpool officials in implementing a carpool service is that individuals will form carpools from the lists provided to them. Hopefully, subsequent carpool formations will be lasting. Eight percent of those respondents who received lists from MAC used the names to form carpools. The average time these carpools lasted was 23 months. Thirteen of the original 24 carpools formed through MAC were ongoing at the time of the survey; thus, the average might be slightly higher depending on how long these carpools last.

### Carpool Organizational Sources

Individuals reported several sources for forming their present carpools. Not all individuals who utilized Metro Area Carpool's services were able subsequently to form a carpool for various reasons. MAC informational

TABLE 15  
SOURCE OF CARPOOL FORMATION

	No.	%
On Your Own	84	70.6
Through MAC	24 <sup>a/</sup>	20.2
Through Employer	11	9.2
TOTAL	119	100.0

<sup>a/</sup> The figure represents the number of individuals who stated that they started a carpooling utilizing the list received from MAC. Only 13 of these individuals are presently carpooling.

TABLE 16  
 AMOUNT SAVED PER MONTH THROUGH CARPOOLING  
 BY TOTAL DISTANCE ROUND-TRIP TO WORK

Dollars Saved	One-ten Miles		Eleven-twenty Miles		Twenty-one-Forty Miles		Over Forty miles		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
One-twenty Dollars	11	11.0	12	12.0	3	3.0	1	1.0	16	16.0
Twenty-one- Thirty Dollars	6	6.0	5	5.0	6	6.0	0	0.0	17	17.0
Thirty-one- Fifty Dollars	4	4.0	13	13.0	13	13.0	4	4.0	34	34.0
Over Fifty Dollars	2	2.0	9	9.0	7	7.0	4	4.0	22	22.0
<b>TOTAL</b>	<b>23</b>	<b>23.0</b>	<b>39</b>	<b>39.0</b>	<b>29</b>	<b>29.0</b>	<b>9</b>	<b>9.0</b>	<b>99</b>	<b>100.0</b>

TABLE 17												
DISTANCE CARPOOLERS TRAVEL TO WORK ROUND-TRIP BY AMOUNT SPENT PER MONTH FOR WORK TRANSPORTATION												
Distance Round Trip	One- Fifteen Dollars		Sixteen- Thirty Dollars		Thirty-one- Fifty Dollars		Fifty-one- Eighty Dollars		Over Eighty Dollars		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One-Five Miles	1	1.0	3	3.0	0	1.0	1	1.0	0	0.0	5	5.0
Six-Ten Miles	2	2.0	9	9.0	4	4.0	1	1.0	1	1.0	17	17.0
Eleven-Twenty Miles	7	7.0	18	18.0	10	10.0	4	4.0	1	1.0	40	40.0
Twenty-one- Forty Miles	4	4.0	10	10.0	8	8.0	3	3.0	4	4.0	29	29.0
Over Forty Miles	0	0.0	0	0.0	2	2.0	3	3.0	4	4.0	9	9.0
<b>TOTAL</b>	<b>14</b>	<b>14.0</b>	<b>40</b>	<b>40.0</b>	<b>24</b>	<b>24.0</b>	<b>12</b>	<b>12.0</b>	<b>10</b>	<b>10.0</b>	<b>100</b>	<b>100.0</b>

TABLE 18												
DISTANCE NOW-CARPOOLERS TRAVEL TO WORK ROUND-TRIP BY AMOUNT SPENT PER MONTH FOR WORK TRANSPORTATION												
Distance Round Trip	One- Fifteen Dollars		Sixteen- Thirty Dollars		Thirty one- Fifty Dollars		Fifty-one- Eighty Dollars		Over Eighty Dollars		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
One-Five Miles	11	6.3	11	6.3	2	1.1	1	0.6	1	0.6	26	14.8
Six-Ten Miles	6	3.4	16	9.1	10	5.7	6	3.4	1	0.6	39	22.2
Eleven-Twenty Miles	6	3.4	29	16.5	20	11.4	6	3.4	8	4.5	69	39.2
Twenty-one- Forty Miles	2	1.1	5	2.8	10	5.7	11	6.3	8	4.5	36	20.5
Over Forty Miles	0	0.0	0	0.0	1	0.6	2	1.1	3	1.7	6	3.4
<b>TOTAL</b>	<b>25</b>	<b>14.2</b>	<b>61</b>	<b>34.7</b>	<b>43</b>	<b>24.4</b>	<b>26</b>	<b>14.8</b>	<b>21</b>	<b>11.9</b>	<b>176</b>	<b>100.0</b>



services might have planted the seed for the idea for those who did form a carpool through some other source.

Table 15 reveals the various sources used by individuals to form carpools. The majority, 70.6 percent, formed carpools on their own. MAC services were reported as the source of carpool formation by 20.2 percent of the respondents. Another 9.2 percent of the respondents stated that they formed their carpools through their employers.

#### Comparisons of Carpoolers and Non-Carpoolers

An important factor for individuals in carpooling or not carpooling is the cost of getting to work. This section reveals three sets of findings related to the perceived benefits of carpooling. Carpoolers were asked how much money they saved per month by traveling to work with others. Both carpoolers and non-carpoolers were asked how far they traveled to work round trip daily and how much they spent to get to work per month.

Table 16 reveals the amount of money which carpoolers felt they saved per month according to how many miles they traveled round trip daily. Overall, the majority of carpoolers felt that they were saving money by carpooling. The table reveals a general consistency in the amount which individuals felt they saved per month by miles driven. For example, 11 percent of those driving up to ten miles daily felt that they saved 20 dollars or less. This compares to only 2 percent driving this far who felt they were saving over 50 dollars. A similar comparison is found in the category of individuals driving 20 to 40 miles daily. Fewer felt that they saved less than 20 dollars than those reporting savings of 31 to 50 dollars per month. The savings, of course, are dependent on the size of the car driven and the size of the carpool. The table does, however, point to the fact that individuals are saving money by carpooling, and the amount saved increases directly with miles traveled.

Tables 17 and 18 reveal the distances that those presently carpooling and not carpooling, respectively, drive to work daily by the amount that they spend to get to work. The table reveals that a larger percentage of carpoolers than non-carpoolers drove more than 20 miles to work round trip. For this distance, carpoolers generally spent less money for work transportation than non-carpoolers. For those traveling between 11 and 20 miles, non-carpoolers clearly spent more to get to work than carpoolers; most notably, 11.6 percent of non-carpoolers versus 2.5 percent of carpoolers

spent over 80 dollars to travel this distance. Similarly, 17.9 percent of non-carpoolers compared to 11.8 percent of carpoolers that traveled six to ten miles to work round trip stated that they spent over 50 dollars a month to get to work.

#### Discussion

Metro Area Carpool officials revealed that the average cost of operating an automobile is 20 cents per mile. This, of course, varies depending on the type of automobile driven. The results from the questionnaire revealed no significant differences between the types of automobiles driven by carpoolers and non-carpoolers. A comparison of Tables 17 and 18 shows that carpoolers are clearly spending less money to get to work than are non-carpoolers. Such findings lend support to the need for continuing the carpooling program in the City of Omaha.

## SUMMARY

### Rationale and Methods

The Metro Area Carpool Study was designed to evaluate those issues which CAUR and MAC officials determined as crucial measures of the program. MAC officials were concerned with the effect of their matching and informational services on the formation of carpools. Furthermore, they were concerned with the rating of their program by individuals requesting services and what views respondents had concerning how MAC should be funded. Last of all, MAC officials were concerned with the motives of individuals for carpooling or not carpooling.

### Results

Generally, the response rate and the number of names sent out were found to be related to the subsequent formation of carpools. Those individuals who received lists with a greater amount of names were more likely to form carpools. Also, those respondents who received a list within one week were more likely to form or at least attempt to form a carpool.

#### Rating of MAC

The majority of respondents for the entire sample rated the idea of carpooling as either very good or good. Differences were found between the ratings of MAC services when carpoolers and non-carpoolers were compared. Those presently carpooling tended to rate MAC services higher than did non-carpoolers. Those who received no list or no response from MAC were inclined to rate the service lower. Respondents stated that improvements were needed in several areas. These included updated lists and name matching, promotion and advertising, education of the public and large companies, and more services to the public and large companies.

### Funding of MAC

The majority of respondents felt that both public funds and Metro Area Transit should provide funds for the Metro Area Carpool Program. More respondents in both classifications felt that Metro Area Transit should continue to support MAC. An important finding was that the majority of respondents realized the importance of some type of carpooling program and were willing to share the responsibility of supporting it through tax dollars.

### Motives for Carpooling

Those presently carpooling most often gave economic-related reasons for their decision to carpool. Other reasons cited were related to driving conditions, parking problems, or some combination of these factors. Several reasons were given by respondents for not carpooling. The majority of non-carpoolers stated that no others were available to carpool with. About one-third of those not carpooling stated their present employment did not allow them to match either hours or locations with other carpoolers. Other reasons cited were either family-related, bus-related, or convenience-related. The majority of carpoolers formerly drove to work alone. About 8 percent always utilized carpooling. About 70 percent of those not carpooling stated that they presently drove alone to work. About one-fourth of those not carpooling utilized either the bus or some form of non-energy consuming transportation.

### Discussion

Some typical questions asked in conjunction with the four major issues included: Are the present inputs and activities sufficient to produce the desired results? Do changes need to be made? Can the program be made more efficient? What operations and procedures should be changed? What program strategies and techniques should be added or dropped? Should the program be continued? How much are the various programs costing? The research attempted to provide information which might aid MAC officials in answering these and other questions in order to determine the future direction of the program.

This part of the discussion will attempt to answer the above questions as they apply to the Metro Area Carpool Program. The program presently

has insufficient accurate names to produce the desired results. Some individuals requesting match-up from MAC can be helped.

Some changes that are viewed as potentially useful are: 1) updating current file on individuals requesting services, 2) changing the method of storing files, 3) modifying the process of checking on individuals requesting match-ups, and 4) increasing assistance to public and private companies in Omaha.

The current file of individuals who have requested service needs to be adjusted to reflect accurate information about MAC patrons. The evaluation revealed that 54.6 percent of the individuals with whom a contact or an attempted contact was made had either moved, changed employment (hours or locations), or changed their phone numbers. To bring the file up to date the remaining 3,800 individuals need to be contacted by telephone to determine their current status. The use of a telephone inquiry is suggested because the use of mailed update requests does not seem to have been effective.

The need to know the role which individuals will take in a carpool is of major importance. Currently, individuals are asked to state their preferences. This does not prevent non-drivers from being matched with other non-drivers. Such a match-up does not produce a carpool. This issue was raised by some of the respondents who attempted to form carpools from the list they received from MAC.

As much as 50 percent of the demographic data might be wrong in the current file. Furthermore, 35 percent of the respondents stated that they preferred to ride only. Both of these factors limit the value of lists sent out to individuals.

The second area of concern is in the storage of the current files. A computer match-up is suggested. A change in the file configuration is suggested to increase efficiency. The name, street address, city, and telephone numbers do not need to be included in the system file stored on individuals. Each individual can be assigned a number, and the above demographic data can be stored on corresponding numbered index cards. These cards can be subsequently duplicated to allow cross-referencing by number, alphabetical listing, home area code, and work area code. The current file configuration does not provide efficient data operation.

Furthermore, the usage of a number of software programs could increase the utility of the data. In particular, a program called CARPOOL used for

forming carpools in California with the same matching procedures presently attempted by MAC could be modeled. Programs might also be used by employing SPSS techniques.<sup>4</sup> The payoff again might be well worth the time and expense.

File construction and tape usage might be investigated. The cost of the tape is around \$35.00. The tape storage is about \$30.00 a year. The tape could be accessed to allow match-up on a weekly basis. Weekly accesses would cost about \$35.00 a year. An additional cost would be that of running the program to produce match-up. The overall needs for this improvement call for typing the data into the terminal, mounting the data to tape, storing the tape, accessing the tape, and the computer time needed to run the program.

The third major point of suggested improvement is in the area of the process used in checking on individuals requesting match-up service. The key to success may well be the telephone. People generally are appreciative when someone shows them some individualized concern. In the time currently being used to type names and envelopes, calling the individual and personally giving the desired information might be just as efficient. The individual could then be re-contacted within one week to find out if he/she has used the names to form a carpool. This personal call may prod the individual to use the list and, at the same time, increase his satisfaction with MAC. After these initial calls, each individual could be contacted on a periodic basis to insure that his file is kept current. Metro Area Carpool officials informed the CAUR staff that they receive about 30 requests per week from individuals requesting match-up. The procedures suggested above should not present an overload to the present operations.

The final major point of suggested improvement concerns renewed contacts with public and private companies in Omaha. MAC officials informed the CAUR staff that they now provide informational assistance to companies on a consulting basis. As stated earlier in the report, every Omaha company with more than 50 employees could be contacted. The possibility exists that arrangements might be reached whereby the companies incur the cost of needed printed material and other related expenses.

The above suggestions are limited to present budget constraints. The findings presented are a starting point for decision makers to assess the current state of the carpool program and move toward policy decisions. The findings reflect success in some areas and point to the needed improvements in others.

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<sup>4</sup>Norman H. Nie, C. Hadlai Hull, Jean Jenkins, Karin Steinbrenner, and Dale H. Brent, Statistical Package for the Social Sciences, New York: McGraw-Hill, 1975.

Evaluation is but one step of the entire planning model. The next logical step in the process is a re-identification of problem areas followed by setting new objectives and goals. Future successes will necessitate capitalizing on known problems, setting realizable goals, and constant monitoring to assure that objectives are being met.

### Recommendations

Metro Area Carpool performs a needed public service for the Omaha area and should continue to do so. The following is a summary of the recommendations.

1. MAC should establish a plan of operation with definite objectives. These should be constantly monitored to assure they are being met. Periodic evaluations should be included in the planning model to assess the effectiveness of the program.
2. The file should be updated to insure that all names of individuals who have requested service are current and to further insure that those who request names in the future will receive current lists.
3. The present data management system should be improved where possible by using specific computer programs.
4. The use of the telephone should be utilized as much as possible to respond to requests. The transition to a more personalized-type service may produce better results in two areas: 1) individuals making use of the lists they receive and 2) keeping information on individuals current.
5. An effort should be made to contact any Omaha company with more than 50 employees for the purpose of establishing, or re-establishing where applicable, an informational and educational network aimed at the formation of carpools.

APPENDIX A



\_\_\_\_\_, This is \_\_\_\_\_ I'm working for the Center for Applied Urban Research at UNO. We are presently conducting a study for Metro Area Carpool. If you have a few minutes I would like to ask you a few questions concerning the program.

Sex (1) \_\_\_\_\_ Male (2) \_\_\_\_\_ Female

IDNUM \_\_\_\_\_

Name \_\_\_\_\_

Phone Number \_\_\_\_\_ (H or W)

1. Is your current address? ... (same as on card) \_\_\_\_\_

a. Home Area Code \_\_\_\_\_

b. What is your employer's address? \_\_\_\_\_  
\_\_\_\_\_

(If this is the same as on card, use work area code given.)

c. Work Area Code \_\_\_\_\_

2. Did you receive a list from Metro-Area Carpooling after contacting them?

(1) \_\_\_\_\_ Yes (2) \_\_\_\_\_ No (3) \_\_\_\_\_ Yes, response but no list.

If NO go to Question 3

IF YES

2a. How long after you contacted MAC did you receive a response?

(1) \_\_\_\_\_ 1-7 days (2) \_\_\_\_\_ 8-14 days (3) \_\_\_\_\_ more than 14 days

(4) \_\_\_\_\_ don't remember

2b. Do you recall how many names were on the list you received?

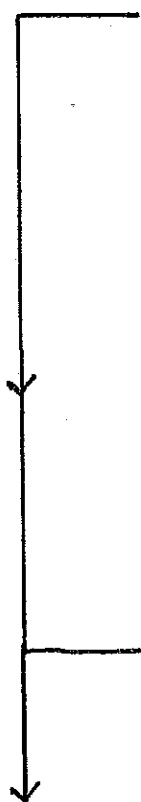
(1) \_\_\_\_\_ One (2) \_\_\_\_\_ Two (3) \_\_\_\_\_ Three (4) \_\_\_\_\_ Four (5) \_\_\_\_\_ Five or More

(6) \_\_\_\_\_ Don't Recall (7) \_\_\_\_\_ Response, but no list of names.

2c. Did you use the list to join or organize a carpool?

(1) \_\_\_\_\_ Yes (2) \_\_\_\_\_ No.

If NO go to Question 3.



If YES

2d. Approximately when did you get into a carpool?

\_\_\_\_\_ Month \_\_\_\_\_ Year

2e. How long did this carpool last?

\_\_\_\_\_ Months \_\_\_\_\_ Still in carpool

IF STILL IN CARPOOL go to Question 3c.

→ 3. Are you carpooling at the present time?

(1) \_\_\_\_\_ Yes (2) \_\_\_\_\_ No

IF NO go to Question 3k.

IF YES

3a. Did you form this carpool... (1) \_\_\_\_\_ on your own (2) \_\_\_\_\_ through MAC  
(3) \_\_\_\_\_ through your employer/company, or (4) \_\_\_\_\_ through some other source.

3b. How long have you been carpooling? \_\_\_\_\_ Months

→ 3c. In your carpool do you...

(1) \_\_\_\_\_ Drive all the time and receive money from riders?

(2) \_\_\_\_\_ Share driving?

(3) \_\_\_\_\_ Share driving and expenses?

(4) \_\_\_\_\_ Ride all the time and pay drivers?

3d. Do you carpool year-round or only seasonally; e.g., winter only?

(1) \_\_\_\_\_ Year-round (2) \_\_\_\_\_ Seasonally (3) \_\_\_\_\_ School year

(4) \_\_\_\_\_ Other (Specify) \_\_\_\_\_

3e. How many days per week do you carpool? \_\_\_\_\_

3f. How many people are in your carpool? \_\_\_\_\_

3g. How many of these people ride regularly? \_\_\_\_\_

irregularly? \_\_\_\_\_

3h. How much money per month do you feel you save by carpooling?

\$ \_\_\_\_\_

3i. How did you get to work before you started carpooling?

- (1) \_\_\_\_\_ Bus
- (2) \_\_\_\_\_ Spouse/other family member
- (3) \_\_\_\_\_ Drove alone
- (4) \_\_\_\_\_ Other (specify) \_\_\_\_\_

3j. What are some of the reasons why you presently carpool?

- (1) \_\_\_\_\_ Economic (e.g. save money, high gas prices, etc.)
- (2) \_\_\_\_\_ Driving conditions (e.g. rush-hour traffic, snow, etc.)
- (3) \_\_\_\_\_ Parking problems (e.g. downtown park, small lots, etc.)
- (4) \_\_\_\_\_ Other (specify) \_\_\_\_\_

Go to Question 4.

Continue from 3a. for NO respondents

3k. How do you presently get to work?

- (1) \_\_\_\_\_ Bus
- (2) \_\_\_\_\_ Spouse/other family member
- (3) \_\_\_\_\_ Drive alone
- (4) \_\_\_\_\_ Walk, bicycle
- (5) \_\_\_\_\_ Other (specify) \_\_\_\_\_
- (6) \_\_\_\_\_ Not working (unemployed)

3l. What are some of the reasons why you presently don't carpool?

- (1) \_\_\_\_\_ Family-related (one-car family, take spouse to work, kids to school, baby-sitter pickup, etc.)
- (2) \_\_\_\_\_ Job-related (unusual-irregular hours, job location, two jobs, etc.)
- (3) \_\_\_\_\_ Student and also employed
- (4) \_\_\_\_\_ No others available to carpool with
- (5) \_\_\_\_\_ Other (specify) \_\_\_\_\_
- (6) \_\_\_\_\_ Lack of information

IF LACK OF INFORMATION, Ask 3m.

3m. If you had the needed information, do you feel you would begin to utilize carpooling?

(1)\_\_\_Yes (2)\_\_\_No (3)\_\_\_Don't know

4. What is the total distance you travel to and from work daily?\_\_\_miles

5. How much do you spend per month to get to work?\_\_\_\_\_

\_\_\_\_\_Not Working

6. Would you rate the idea of carpooling as...(1)\_\_\_Very good (2)\_\_\_Good

(3)\_\_\_Poor (4)\_\_\_Very poor

OR: (5)\_\_\_No comment (6)\_\_\_No information

7. How far out of your way would you drive to pick up riders in forming a carpool?\_\_\_\_\_Miles or (88)\_\_\_\_\_Would not carpool

8. Do you feel that public funds should be used to support Metro-Area Carpool?

(1)\_\_\_Yes (2)\_\_\_No.

9. Do you feel that Metro Area Transit should use its funds to encourage and provide information for carpooling, or do you feel this isn't their responsibility?

(1)\_\_\_Yes, feel MAT should continue to use its funds

(2)\_\_\_No, don't feel MAT should continue to use its funds

(3)\_\_\_Don't know

10. Would you rate the services provided by MAC as...(1)\_\_\_Very good

(2)\_\_\_Good (3)\_\_\_Poor (4)\_\_\_Very poor

or, (5)\_\_\_No comment (6)\_\_\_No information

11. How do you feel it could be improved?\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

To get a more complete picture of those presently utilizing carpooling in the greater Omaha area, we need to ask you some basic demographic information.

12. What is your job title or what do you do at work?\_\_\_\_\_

\_\_\_\_\_

13. Is your age...

(1) \_\_\_ 25 or under

(2) \_\_\_ 26 to 30

(3) \_\_\_ 31 to 40

(4) \_\_\_ 40 to 50

(5) \_\_\_ over 50

14. Is your annual family income above \$15,000?

\_\_\_ Yes \_\_\_ No

IF YES.....above \$25,000

If NO.....below \$10,000

\_\_\_ Yes \_\_\_ No

\_\_\_ Yes \_\_\_ No

(1) \_\_\_ Below \$10,000

(2) \_\_\_ \$10,000 - \$15,000

(3) \_\_\_ \$15,000 - \$25,000

(4) \_\_\_ Above \$25,000

15. What make of car do you drive to work? \_\_\_\_\_

year? \_\_\_\_\_ model? \_\_\_\_\_

(0) \_\_\_ No car

(0) \_\_\_ No Car

(1) \_\_\_ Full-size

(1) \_\_\_ 1979 - 1980

(2) \_\_\_ Intermediate

(2) \_\_\_ 1977 - 1978

(3) \_\_\_ Compact

(3) \_\_\_ 1975 - 1976

(4) \_\_\_ 1970 - 1974

(5) \_\_\_ 1969 or older

16. What is your marital status?

(1) \_\_\_ Married

(3) \_\_\_ Separated

(2) \_\_\_ Single

(4) \_\_\_ Divorced

\_\_\_\_\_, I would like to thank you for your time and comments. The information you have given will be helpful in determining the future of MAC in the greater Omaha area.