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# LEAA Police Equipment Survey of 1972 Volume V: Handguns and Handgun Ammunition

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Technical Analysis Division Institute for Applied Technology National Bureau of Standards Washington, D. C. 20234

Final, July 1971 - August 1973

Prepared for

National Institute of Law Enforcement and Criminal Justice (NILECJ)
Law Enforcement Assistance Administration (LEAA)
Department of Justice
Washington, D. C. 20530

#### REPORTS FROM THE LEAA POLICE EQUIPMENT SURVEY:

The present report is one in a series of reports produced from data gathered by the LEAA Police Equipment Survey of 1972. Listed below are the seven reports of that survey.

- National Bureau of Standards Report 73-214. (The present report). LEAA POLICE EQUIPMENT SURVEY OF 1972, VOLUME V: Handguns and Handgun Ammunition.
- National Bureau of Standards Report 73-210. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume I: The Need for Standards -- Priorities for Police Equipment.
- National Bureau of Standards Report 73-211. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume II: Communications Equipment and Supplies.
- National Bureau of Standards Report 73-212. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume III: Sirens and Emergency Warning Lights.
- National Bureau of Standards Report 73-213. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume IV: Alarm Displays, Security Equipment, and Surveillance Equipment.
- National Bureau of Standards Report 73-215. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VI: Body Armor and Confiscated Weapons.
- National Bureau of Standards Report 73-216. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VII: Patrolcars.

## LEAA POLICE EQUIPMENT SURVEY OF 1972 VOLUME V: HANDGUNS AND HANDGUN AMMUNITION

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#### EXECUTIVES' SUMMARY:

#### I. SUMMARY OF BACKGROUND AND METHODOLOGY

## A. Background (pp. 1-2)

- Law Enforcement Standards Laboratory (LESL) was established in 1970 and became part of the NILEGJ Equipment Systems Improvement Program (ESIP).
- NILECJ asked the Behavioral Sciences Group of the National Bureau of Standards to develop and carry out a procedure to get information from the users of law enforcement equipment.
- "User" information would aid NILECJ in setting priorities for LESL programs and would provide some detailed information so that research to develop standards could begin.
- In addition, gathering information from the users would help to make police agencies aware of LESL and ESIP.
- A nationwide mail sample survey was selected as the best procedure to collect user information.
- An Equipment Priorities Questionnaire (EPQ) and six Detailed Questionnaires (DQs) were developed and administered. A separate report was prepared for each of these seven questionnaires.

#### B. Design of Questionnaires (pp. 8-9)

- Questionnaires were developed in conjunction with NILECJ, LESL, and cooperating police departments. Questionnaires were pretested at various times with approximately 45 police departments.
- The EPQ was designed to provide information about priority needs for standards for various types of equipment.
- In addition, the EPQ asked for data about numbers of fulland part-time officers, activities performed in the department, budget, size of jurisdiction, etc.
- The six DQs (Alarms, Security and Surveillance Equipment; Communications Equipment and Supplies; Handguns and Handgun Ammunition; Lights and Sirens; Body Armor and Confiscated Weapons; and Patrolcars) were each developed separately.

• The DQs asked about kinds and quantities of equipment in use, problems with existing equipment, suggestions for improving equipment, needs for standards related to the equipment, etc. Although entitled Detailed Questionnaires, these questionnaires were designed to give an overview of the use of specific items of equipment.

## C. Sample (pp. 2-6)

- The population sampled was made up of all police departments listed in a computerized file compiled and maintained by the LEAA Statistical Service.
- Courts, correctional institutions, forensic labs, special police agencies, etc., were excluded.
- The sample was stratified by LEAA Geographic Region (10 Regions) and by Department Type (7 Department Types: State Police; County Police and Sheriffs; City Departments with 1-9 Officers; City Departments with 10-49 officers; City Departments with 50 or more officers, excluding the Fifty Largest Cities; the Fifty Largest U.S. Cities by population; and Township Departments).
- Overall, approximately 10% of the 12,836 departments in the population were selected as respondents (see Table 1.2-2).
- The Equipment Priorities Questionnaire was sent to every sample department (1386). Each Detailed Questionnaire was sent to all States, to all of the Fifty Largest Cities, and to a randomly selected subsample of the main sample (about 530 departments received each DQ).
- Thus, States and the Fifty Largest Cities were asked to fill in all seven questionnaires. Each of the remaining 1286 departments were asked to fill in the EPQ and two of the DQs.
- The sample for the Handguns and Handgun Ammunition DQ consisted of 528 departments (see Table 1.2-3).

## D. <u>Questionnaire Administration</u> (pp. 7-8)

- Stringent control of administration was required.
- Introductory letters were sent to heads of departments asking cooperation.
- On June 1, 1972, questionnaire packages were mailed.

- In July 1972, follow-up by self-return postcard was begun.
- In August 1972, follow-up by telephone was begun. Departments which had not returned questionnaires were called. Also, calls were made to clear up ambiguities in the returned questionnaires. About 1300 calls were made. About 70% of the sample departments were called at least once.
- Each questionnaire was edited and coded by a specialized team to ensure consistency; the data were then keypunched and tabulated.
- Completed questionnaires were accipted for tabulation through January 7, 1973.

## E. Rates of Return (pp. 8-9)

- 83% of the 1386 sample departments returned usable EPQs.
- 84% of the 528 sample departments returned usable Handguns DQs.
- 81 85% of the other DQ subsamples returned usable questionnaires.
- Highest rates of return (over 90%) were from States, the Fifty Largest Cities, and Cities with 50 or more officers.
- Lowest rates of return (less than 75%) were from Counties and Townships.

## F. Characteristics of Responding Departments \* (pp. 10-14)

- The activities most commonly carried out by the respondents (to the EPQ) were Serving Traffic and Criminal Warrants (88%), Traffic Safety and Traffic Control (87%), and Intra-departmental Communications (87%).
- All of the responding Fifty Largest Cities said they provided In-House Training and Criminal Investigations. This compared to 68% and 86%, respectively, of all responding departments.
- Only 13% of all respondents had Crime Laboratories. 73% of the Fifty Largest Cities and 55% of the States had Crime Laboratories.
- About three-fifths of the departments in all Department Types were providing Emergency Aid and Rescue, ranging from 60% of the Cities with 50 or More Officers to 67% of the Counties.

<sup>\*</sup>Data reported in this section were based on the answering of 1386 departments which filled in the Equipment Priorities Questionnaire. These departments include, but are not limited to the respondents to the Handguns DQ. For complete information see LEAA Police Equipment Survey of 1972, Volume I.

- Overall, the reported Equipment Budgets represented somewhat over 10% of the Total Budgets reported.
- Among Department Types there was a wide range of total equipment expenditures, from a mean of about \$10,000 for Cities with 1-9 Officers to a mean of almost \$2.6 million for the Fifty Largest Cities.
- One of the Fifty Largest Cities reported an Equipment Budget of \$40 million.
- Overall, the Fifty Largest Cities reported a mean of 2491 Full-Time Sworn Officers. However, one of the Fifty Largest Cities had 27% of all the Full-Time Officers reported by that Department Type and another had about 12%.

#### G. Presentation of Data (pp. 14-17)

- Data in this report are presented in two forms: Text tables and full tables (Appendix B.) Text Tables do not always present a complete break out of the data.
- All tables (text and full) present the data in unweighted form, (i.e., numbers and percentages of the responding departments from the sample for this questionnaire, not figures that have been weighted to expand the data to the total population of police departments in the U.S.)
- The sample selected for this questionnaire was <u>not</u> proportional to the total population of police departments. If decisions are to be made which require estimates of population figures, the appropriate extrapolation must be performed. (See Appendix B.)

#### II. Summary of Results

#### A. On Duty Use of Handguns (pp. 19-23)

- 94% of the responding <u>departments</u> reported at least one officer using a .38 caliber handgun on duty.
- 80% of the officers in those departments were using .38s.
- States (59%), Townships (56%), and Counties (55%) reported the lowest percentages of <u>officers</u> using .38s on duty, while the Fifty Largest Cities (88%) and Cities 50+ (81%) reported the highest percentages.
- Responding States (36%), Townships (36%), and Counties (40%) had the highest percentages of officers using .357 caliber handguns on duty, while the Fifty Largest Cities (9%) and Cities 50+ (16%) had the lowest percentages.

- The .45 Caliber and the 9 mm were each being used by only 1% of the officers in the responding departments.
- The 445 responding departments reported 179,891 officers carrying handguns.
- Estimates of the total population of on-duty handguns in the U.S. showed 70% of all officers using .38s and 25% using .357s.

## B. Most Used and Second Most Used on Duty Handguns (pp.24-30)

- Departments were asked a series of questions about the handgun they had more of in their department than any other (Most Used Handgun), and the same questions about the handgun caliber they had next most of in their department (Second Most Used Handgun).
- 42% of the responding departments reported using only one caliber of handgun.
- The answers about "Most Used Handgun" represented about 91% of all the handguns reported.
- 99% of the handguns that were Most Used or Second Most Used were either .38s or .357s. (82% and 17% respectively.)
- When the .38 caliber was listed as Most Used Handgun, the .357 was the most likely caliber to be listed as Second Most Used Handgun, and vice versa.
- Only 8 of the 445 responding departments said that some caliber other than .38 or .357 was used by more of their officers on duty than any other,
- Almost all (99%) of the reported on duty handguns were revolvers.
- 97% of the responding departments were using only handguns produced by one or both of two manufacturers.
- Of all reported Most Used and Second Most Used Handguns, 80% had barrels 3-5 inches long.
- States reported a higher percentage of handguns with barrels longer than 5 inches (29%) than did any other Department Type.

- C. Ammunition Used with Most Used and Second Most Used Handguns (pp. 31-33)
  - About half of the responding departments were using Lead bullets in their Most Used Handguns, 24% used Hollowpoint and 15% used Jacketed.
  - About two-thirds of the departments were using only one bullet type for their Most Used Handguns, and about half of these were using lead bullets exclusively. 13% were using Hollowpoint exclusively.
  - 73% of the responding departments were using ammunition with bullet weights of 151-160 grains, and few departments were using ammunition with bullet weights higher than this.
  - 59% of the responding departments were using only one brand of ammunition with their Most Used Handguns.
  - Almost 3/4 of the departments that were using only one brand of ammunition were using ammunition made by one of two manufacturers (50% and 22%, respectively).

## D. Off Duty Use of Handguns (pp. 35-37)

- Only 78% of the responding departments answered the question concerning off duty use of handguns. This is not a good measure of the proportion of departments that use handguns off duty.
- 51% of State departments did not answer the question on off duty use of handguns. 75% or more of all other Department Types did give data about off duty handgun use.
- Of the 110,534 officers reported to be carrying off duty handguns, 86% were carrying .38s, 6% were carrying .357s, and 4% were carrying 9mm. This compares to 80%, 17%, and 1% respectively, of the 179,891 officers reported carrying on duty handguns.
- Of the 345 <u>departments</u> that reported off duty handgun use, 96% reported at least one officer using a .38 off duty; 29% reported .357 use; 30% reported 9 mm use; 21% reported .45 use; 22% reported .32 use; and 23% reported .25 Automatic use. (Only two calibers of handguns were represented in more than twenty percent of the departments for on duty use.)

## E. Problems With Handguns (pp. 27-40)

- More than half of the responding departments had either had no problems with their handguns in the last five years (37%) or left this question blank (18%).
- 72% of States and 72% of the Fifty Largest Cities cited at least one handgun problem compared to 46% of all responding departments.
- The two most frequently mentioned problems were those associated with the Cylinder, and those associated with the Hammer or Firing Pin.

## F. Problems With Handgun Ammunition (pp. 40-42)

- Only about one-fourth of the responding departments described a problem with handgun ammunition.
- A much higher percentage of the Fifty Largest Cities (61%) listed a problem than any other Department Type.
- None of the 27 Township departments and only seven departments in Cities with 1-9 officers listed an ammunition problem.
- Problems cited by one-fourth or more of the departments citing difficulties were Power/Penetration Too Low (30%), Knockdown Power Insufficient (27%), and Primer (25%).



#### 1.0 INTRODUCTION

## 1.1 Project Background

During the past several years, law enforcement agencies in the United States have become more aware of the importance of equipment in the performance of their duties. Much of their equipment had originally been designed for other uses and had to be modified. Other equipment items had to be used as given. No standards existed against which equipment performance could be measured nor were any standard test methods or procedures available. It has been difficult for agencies to compare the performance of equipment items. Recognizing this problem, in 1970, the Law Enforcement Assistance Administration (LEAA) of the Department of Justice began a concentrated program toward the improvement of law enforcement equipment.

As the first step in its Equipment Systems Improvement Program (ESIP), LEAA, in cooperation with the Department of Commerce established a Law Enforcement Standards Laboratory (LESL) at the National Bureau of Standards (NBS). The broad goal of LESL is to establish voluntary performance standards which can be used as guidelines for the selection of equipment by law enforcement agencies. Additionally, LESL is developing standard test methods and procedures, so that the relative performance of similar items may be evaluated by departments themselves.

In order to provide equipment user information for the ESIP program, in 1971 the National Institute of Law Enforcement and Criminal Justice (NILECJ) of LEAA asked the Behavioral Sciences Group of the Technical Analysis Division at NBS to gather information from the users of law enforcement

equipment about their specialized equipment needs and problems. Although face-to-face interviews with a large sample of representatives from law enforcement agencies would have been desirable, time and manpower constraints led to the development of a nationwide, mail sample survey having two general objectives: (1) To assist NILECJ in the establishment of priorities for LESL's standards development activities; and (2) to obtain detailed information about certain broad equipment categories so that research to develop standards in these areas could begin.

This report fulfills part of the second general objective and the associated survey questionnaire (see Appendix A) will be referred to as the Handguns and Handgun Ammunition Detailed Questionnaire (DQ). The remainder of the second objective is accomplished in the reports of the other five DQs: Alarms, Security and Surveillance Systems; Communications Equipment and Supplies; Sirens and Emergency Warning Lights; Body Armor and Confiscated Weapons; and Patrolcars. The first objective (above) is accomplished in the report on the Equipment Priorities Questionnaire (EPQ).\* A complete listing of these seven reports may be found on the inside front cover of this report.

#### 1.2 Sample Design

Although the objective of ESIP is to serve all types of law enforcement agencies, this particular study was purposefully limited to police departments as the largest single group of law enforcement agencies with

<sup>\*</sup> LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume I: The Need for Standards Priorities for Police Equipment.

identifiable equipment needs. No attempt was made to survey correctional institutions, courts, forensic laboratories, or special police agencies such as park police, harbor patrols or university police. The computerized directory of approximately 14,000 police agencies, compiled and maintained by LEAA's Statistics Division, provided the population from which the sample was drawn. Care was taken to exclude the double listings that existed for some agencies. (Details of the selection process are given in Appendix B of the Equipment Priorities Questionnaire.)

The final list of 12,842 departments was cross-stratified by LEAA geographic region and department type by the mutual agreement of NBS and NILECJ. The assignment of states to regions and the seven department types chosen for study are shown in Table 1.2-1.

## Table 1.2-1. Stratification Categories

#### DEPARTMENT TYPES:

State Police
County Police & Sheriffs
City with 1-9 Officers
City with 10-49 Officers
City with 50 or more Officers\*
The 50 Largest U.S. Cities\*\*
Township Departments

#### LEAA GEOGRAPHIC REGIONS:

- 1 = Conn., Maine, Mass., N.H., R.I.,
   Vt.
- 2 = N.J., N.Y.
- 3 = Del., Md., Penn., Va., W.Va., D.C.
- 4 = Ala., Fla., Ga., Ky., Miss., N.C., S.C., Tenn.
- 5 = Ill., Ind., Mich., Ohio, Wis., Minn.
- 6 = Ark., La., N.M., Okla., Tex.
- 7 = Iowa, Kan., Mo., Neb.
- 8 = Colo., Mont., N.D., S.D., Utah, Wyo.
- 9 = Ariz., Calif., Nev., Hawaii
- 10 = Alas., Idaho, Ore., Wash.

The breakdown of the <u>population</u> of police departments by cross-strata is exhibited in Table 1.2-2. As can be seen from the table, there were no Townships in Regions 4, 6, 7, 8, 9 and 10. Almost 63% of the departments

<sup>\*</sup> Does not include the 50 Largest Cities.

<sup>\*\*</sup> By Population, U.S. 1970 Census.

Number of Police Departments by Region and Type Table 1.2-2

TOTAL	50*	3137	5486	1985	554	L	00
10	4	120	217	79	17	,	7
6	4	103	135	168	87	α	)
8	9	288	283	. 71	19	Н	
7	4	413	611	142	23	m	
9	S	506	703	230	46	ω	
Σ	9	536	1470	208	119	10	
4	8	764	616	344	83	ω	
3	ហ	257	713	166	36	Ŋ	
2	2	84	348	237	64	4	
T	9	99	27	40	09	н	
DEPARTMENT TYPE	State	County	City (1-9 Officers)	City (10-49 Officers)	City (50 or More Officers	50 Largest Cities	

Questionnaires were actually sent to 56 State Police departments since there were 6 State Departments which listed two police agencies without reference to a common central agency. However, only one set of questionnaires was accepted from each of these 6 agencies as described in Volume I, Appendix B,

The conventions used in displaying and reporting the results of the questionnaires are presented on page 16, section "g". Note:

were City police, 43% having 1-9 full-time officers. County departments comprised about 24% of the population. By Region, the smallest (Region 10) contained only 3.4% of the police departments, while Region 5, the largest, had 22.5%. The variation in the number of departments in a cell (Region/Department Type combination) was even greater than that across the strata, i.e., the number of departments in each cell ranged from 0 to 1470.

The considerations discussed in the previous paragraph led to the sampling plan discussed briefly below. All of the State departments and the Fifty Largest City departments were included in the sample and were asked to complete all six DQs, i.e., they were sent the entire package of seven questionnaires. For the remaining cells the variation in cell size presented a problem: If the same fraction of the entire population was to be selected from the members of each cell, a constant sampling fraction large enough to make the total sample manageable would yield too few sample units in small cells. To solve this problem, a fixed sample of 30 police departments/cell was chosen, wherever possible, resulting in a different sampling fraction for each cell. A fixed sample size of 30 departments/cell was chosen to facilitate the equitable distribution of the six DQs. This plan resulted in sending the Handquns DQ to 528 departments.

The departments were selected randomly within each cell, from the total cell population, each department (other than the States and Fifty Largest Cities) receiving two DQs. Thus, in cells having 30 sample units, the Handguns DQ was mailed to 10 departments; cells having fewer sample units were allocated proportionally fewer Handguns DQs. Table 1.2-3 presents the total sample for the Handguns DQ by Region and Department Type.

Number of Sample Departments Selected to Receive the Detailed Questionnaire: Handguns, by Region and Department Type. Table 1.2-3.

DEPARTMENT TYPE:

LEAA GEOGRAPHIC REGION:

		2	3	4	2	9	7	8	0	10	Tota1
State*	9	2	2	8	9	2	4	9	4	4	20
County	10	10	10	10	10	10	10	10	10	10	100
City 1-9 Officers	6	10	10	10	10	10	10	10	10	10	66
City 10-49 Officers	10	10	10	10	10	10	10	10	10	10	100
City 50+ Officers	10	10	10	10	10	10	ω <sub>.</sub>	9	10	5	68
50 Largest Cities	1	4	5	8	10	8	Э	1	8	2	50
Townships**	10	10	10		10	-	1	l ì			40
Total	56	56	60	56	99	53	45	43	52	41	528
	President Street Street										

agency. However, only one set of questionnaires was accepted from each of these six \* Questionnaires were actually sent to 56 State departments since there were six State departments which listed two police agencies without reference to a common central agencies.

3 and 5. 2, \*\* Township departments exist only in Regions 1, Once the sample was selected, each sample unit was assigned a unique seven-digit identification number coding region, type, and questionnaire assignment.

## 1.3 Questionnaire Administration

From the beginning of the project, it was evident that stringent control would be required in administering the questionnaires to ensure a high rate of response. Computer-stored daily status records were input via a teletypewriter for each sample department, In general, the following procedure was used:

- (a) Each department in the sample was mailed a letter, signed by the director of NILECJ, addressed to the head of the department. This letter introduced the survey and requested cooperation.
- (b) About one week later, the questionnaire packages were mailed.
- (c) Departments not returning the questionnaires within a month were identified by the computer and were sent a self-return postcard requesting information as to the status of the questionnaires. Departments not receiving the questionnaire package were sent another; those not returning the postcard were placed on a list for telephone follow-up.
- (d) About a month and a half later, departments with which no contact had been made were called by telephone.
- (e) Returned questionnaires were reviewed for completeness and either coded for keypunching or filed for telephone call-back to supply missing data or to resolve ambiguities.

Considerable effort was expended to ensure a high rate of response, and this effort was rewarded with an 84% response for the Handguns DQ, and between 80% and 85% for each of the other questionnaires. In the course of the survey more than 70% of the sample departments were contacted at least once by telephone. More than 1300 phone calls were made by the survey team.

The distribution of respondents (departments which returned usable Handguns DQs) is exhibited in Table 1.3-1. The highest percentages of response were from the States and larger Cities (89-94%), while Counties and Townships had the poorest response rates (under 75%). These data would seem to be partly explained by the fact that the larger departments use more equipment than do smaller departments and, therefore, have a greater interest in developing standards.

## 1.4 Development and Design of the Handguns DQ

The survey plan and questionnaire design (of all seven questionnaires) evolved over a 12-month period. During this time, the survey team consulted at length with NILECJ equipment experts, LESL program managers, and equipment manufacturers. In addition, the officers and administrators of about 45 police departments served as consultants and/or as respondents for pretests of various versions of the questionnaires.

The Handguns DQ, in its final form, is reproduced in Appendix A. This DQ asked respondents to identify the kinds of handguns being used by officers in the department both on duty and off duty; to fully describe the handgun used by more of their officers than any other and the handgun used by the next greatest number of officers; to provide data on the types of ammunition

Number of Sample Departments Returning Acceptable Detailed Questionnaire: Handguns and Handgun Ammunition. Table 1.3-1.

DEPARTMENT TYPE:					LEAA	LEAA GEOGRAPHIC REGION:	PHIC R	EGION:				% E
	П	2	3	4	2	9	7	8	6	10	Total	SAMPLE
State*	9	2	5	8	9	5	Э	9	3	3	47	94%
County	2	7	9	8	8	5	8	6	10	7	73	73
City 1-9 Officers	7	10	7	6	6	7	6	8	6	6	84	85
City 10-49 Officers	6	8	7	6	10	8	6	10	10	6	68	68
City 50+ Officers	6	8	10	6	8	10	7	5	8	5	79	68
50 Largest Cities	1	Э	4	7	8	8	3	٦	ω	2	45	06
Townships**	7	6	7		4						27	89
Total	44	47	46	50	53	43	39	39	48	35	444	84%
PERCENT TOTAL SAMPLE	79%	84%	77%	868	80%	81%	87%	91%	92%	85%	84%	

agency. However, only one set of questionnaires was accepted from each of these six \* Questionnaires were actually sent to 56 State departments since there were six State departments which listed two police agencies without reference to a common central agencies.

<sup>\*\*</sup> Township departments exist only in Regions 1, 2, 3 and 5.

being used and to discuss problems with handguns and ammunition. The questionnaire was limited to general topics because: (1) It was not possible, considering the scope of the present survey, to explore in a detailed manner specific information about all types of weapons being used in the department; and (2) it was felt that the general data gathered in the present effort would provide important direction for research in the development of standards, the main objective of the survey.

## 1.5 Characteristics of Subsample Groups

The EPQ of the LEAA Police Equipment Survey\* requested data from each department about population served, physical size of jurisdiction served, type of jurisdiction, number of full- and part-time officers, approximate total, equipment, and personnel budgets during 1971, and activities handled by the department.

Table 1.5-1 presents a partial tabulation, by department type, of the responses to a check list of 30 typical police activities by the respondents to the EPQ. (The EPQ respondents include, but are not limited to, the respondents to the Handguns and Handgun Ammunition DQ. See Section 1.2.)

The activities most frequently checked by all departments were: (1) Serve Traffic and Criminal Warrants (88%), (2) Traffic Safety and Traffic Control (87%), and (3) Communications for Own Department (87%). The activity with the most consistent level across all Department Types was that of Emergency Aid and Rescue, ranging from 60% (Cities with 50+ Officers) to 67% (Counties).

<sup>\*</sup> LEAA Police Equipment Survey of 1972. Op. cit.

Activities Handled by AT LEAST ONE-THIRD of That Department Type by Department Type, and Percent of Total Departments Having Each Activity Table 1.5-1.

DESCRIPTION OF ACTIVITY:			T	ι·		50		
	State	County	1-9	10-49	20+	Largest	Township	Tota
	0/0	%	0/0	0/0	0/0	0/0	o/o I	0√0
raffic and Criminal	7.0	89		89		87	93	
Traffic Safety and Traffic Control	9.2	56		96	96	86	94	87
ations for Own Depa	94	86	97	95	94	96	7.0	87
rt l	99	86		95	97	100	79	
Police Training for Own Department	98	55		77	87	100	42	
stody/Detention-Less t	1	7.9		73	72	80	4.3	65
eath-Alcohol Test	89	46		72	83	91	49	
	6.2	67		63	09	67	62	
Public Building Protection	1	40		09	58	44	68	54
Service Function	0	ē		55	09	09	42	Δ,
Animal Control (Dog Catcher)	ì	B		63	42	ı	3.7	44
	96	38		36			88	43
of Police Building	51	36		41	48	47		40
ion-1 We	0	73		36	46	49		38
nications for Other Agenc	.66	56		40	ı	3		36
ocess	1	88			0	ı		32
Police Training for Other Agency	7.7	B			42	84		24
tention-Up to 1	1	78			1			22
Ы	34	4.2			619 619	42		19
Bomb Disposal	4.5					82		17
Polygraph	62				36	06		17
Vehicle Inspection	55							17
Crime Laboratory	55				And Commercial State of the Co	73		13
Narcotics Laboratory Analysis	43					62		
Harbor Patrol	ı							7
Lab Analysis for Blood Alcohol	34				-	53		7
Other	1							9
Coroner	ŧ							2
Tests for Drivers License	34							m
Custody/Detention-More than 1 Year								(1)
			-			-	money and they street me impressed the first way	-

Higher percentages of State and Fifty Largest City departments than of other departments were handling certain of the 30 activities. For example:

All of the Fifty Largest City departments responding, and 98% of the responding State departments, said that their departments provided Police Training for Own Department. These compare to 68% for the total sample of departments. All of the responding Fifty Largest Cities said that they handled Criminal Investigation in their own departments. This compares to 86% of the total sample of departments. Although only 13% of the departments overall had Crime Laboratories, 73% of the Fifty Largest Cities and 55% of the States reported having them.

Counties appeared to be the only Department type with significant responsibilities for custody and detention for more than 1 week. Seventy-eight percent of these departments had Custody/Detention-Up to 1 Year, as compared with 22% of all responding departments.

Tables 1.5-2 and 1.5-3 present summaries of descriptive data by Department Type and LEAA Region, respectively. As can be seen from the column for Annual Equipment Budget (Table 1.5-2), there was a wide range of expenditures among different Department Types: From a mean of about 10 thousand dollars for responding Cities (1-9) to almost 2.6 million dollars for the Fifty Largest Cities. Overall, equipment budgets represented somewhat over 10% of the Annual Total Budgets.

The mean Number of Part-time Officers was based on those respondents having part-time officers in their departments. Of the 45 responding from the Fifty Largest Cities, only six had part-time officers, including one city which had nearly 6000. Thus, the mean value of 1115 for this department type is somewhat misleading. It should be noted that the category Part-time Officers included officers described as auxiliary, volunteer, reserve,

Table 1.5-2, Descriptive Data by Department Type (Means)

Area Department Type (Sq. Miles)	Ārea (Sq. Miles)	Population	Number of Full-Time Officers	Number of Number of full-Time Part-Time Officers Officers	Annual Total Budget	Annual Equipment Budget	Annual Personnel Budget
50 Largest	187	851342	2491	1115	\$43,268,865   \$2,669,920 \$34,712,818	\$2,669,920	\$34,712,818
State	62580	3936410	889	18	\$16,377,358	\$2,304,339	\$12,020,572
County	1518	130254	. 60	25	\$ 1,089,919	\$ 58,539.	\$ 859,984
City (50+)	31	83344	132	26		\$ 173,099	\$ 173,099 \$ 1,407,177
City (10-49)	1.2	15849	, 22	6	\$ 257,927	\$ 24,362	\$ 206,187
Township	28	13228	14	8	\$ 175,654	\$ 20,854 \$	\$ 141,675
City (1-9)	6	5038	ω	S	\$ 82,381	\$ 9,764 \$	\$ 60,061

Table 1.5-3 Descriptive Data by LEAA Region (Means)

1			1 "			1				- 1
Annual Personnel Budget	116,676 \$	\$ 148,172 \$5,265,546	\$2,879,293	248,600 \$1,767,292	\$3,879,374	160,363 \$1,709,910	969,886 \$	\$ 553,463	\$ 728,801 \$4,528,692	82,198 \$1,011,604
Annual Equipment Budget	\$ 135,130	\$ 148,172	\$ 435,153	\$ 248,600	\$ 431,478	\$ 160,363	\$ 121,001	\$ 77,081	\$ 728,801	\$ 82,198
Annual Total Budget	\$ 1,360,155	\$ 7,148,315	\$ 3,412,567	\$ 2,318,382	\$ 4,916,607	\$ 2,193,823	\$ 1,220,385	\$ 728,549	\$ 5,743,553	\$ 1,253,894
Number of Part-Time Officers	18	97	7	7	8	1.7	6	6	46	6
Number of Number of Full-Time Part-Time Officers Officers	96	365	216	151	283	160	84	54	281	69
Population	158112	240781	24 57 33	340996	448174	271386	11 2094	83023	372094	1.04877
Area (Sq. Miles)	7.50	648	1096	3691	. 2652	5738	2379	6346	4218	3 580
LEAA Region	g	2		7	2	9	7	8	6	10

school-crossing guard, dispatcher, summer, special agent, traffic supervisor, posse, and cadet. All of these classifications were counted in the Part-time Officer category since it has different meanings for different departments.

Variations in these descriptive averages by LEAA region (Table 1.5-3) were considerably smaller than variations by department type. Regions 1 and 8 had smaller budgets than the others, primarily because each contained only one of the Fifty Largest Cities.

#### 2.0 QUESTION BY QUESTION DISCUSSION

## 2.1 Advice to the Reader

In reading Section 2, certain points should be kept in mind:

- (a) THIS REPORT IS NOT AN EVALUATION OF ANY OF THE EQUIPMENT

  DESCRIBED OR DISCUSSED WITHIN IT. IT IS A PRESENTATION OF

  INFORMATION AND OPINIONS OF A STRATIFIED RANDOM SAMPLE OF

  POLICE DEPARTMENTS GIVEN IN RESPONSE TO A SPECIFIC SET OF

  QUESTIONS. IT DOES NOT, IN ANY WAY, REFLECT OBJECTIVE

  TESTING OF ANY EQUIPMENT BY THE NATIONAL BUREAU OF STANDARDS.
- (b) The report reflects only what police departments were willing and able to say in response to a specific set of questions. In most cases, no attempt was made to verify the accuracy of the information given or the level of sophistication of the respondent.
- (c) Each discussion begins with the presentation of the question that appeared in the questionnaire, and in most cases the choices supplied, if any, are set off in a box. Hewever, the

- reader is cautioned to become familiar with the questionnaire sent to sample departments (see Appendix A) and to evaluate the data in terms of the exact questions asked.
- the complete tables that appear in Section 2 are almost never
  the complete tables that were tabulated for that question.

  Data categories for text tables may have been collapsed
  from the full table, or certain categories of interest may
  have been singled out for fuller discussion. Appendix B
  contains the complete tables from which the text tables were
  extracted. Text tables have been numbered after the question
  number (e.g., the text tables for question 6A. would be
  numbered 6A-1, 6A-2, etc.). The tables in Appendix B are
  also numbered after the question number, in the same manner.
  In some cases, tables that appear in Appendix B will not
  have been discussed at all in the text.
- (e) Data in the text of this report are usually presented by nearest whole percent of the group under consideration. In Appendix B, the data are usually presented by number of respondents and percent. Because of statistical limitations imposed by the sample sizes used in this study, the reader is cautioned to be wary of assigning importance to percentage differences of less than 5% when percentages are based on the total number of respondents, and to percentage differences of less than 10% when percentages are based on one of the subsample groups, (e.g., a particular Department Type or Region).

  No statistical tests of significance are reported.

- if any, in the questionnaire. Any "other" choices written in by the respondents were also tabulated and/or recorded verbatim. In most cases, the numbers of respondents giving a specific "other" response do not reflect the numbers of respondents who would have marked that choice if it had been one of those provided. Therefore, in most cases, this report lists or gives examples of "other" responses, but does not present numbers or percents of departments giving that response. For those questions for which choices were not provided in the questionnaire, coding categories were developed after approximately one-fourth of the questionnaires had been returned.
- (g) The subsample groups (Department Types and Regions) are capitalized when they are discussed in the text. In addition, the four Department Types which are composed of City departments are at times discussed as a group. In those cases, the word "city" is also capitalized. The following convention has been adopted in the report to designate the four City Department Types:

City with 1-9 Officers = City (1-9)
City with 10-49 Officers = City (10-49)
City with 50 or more Officers = City (50+)
The Fifty Largest Cities = Fifty Largest or 50 Largest

When the subsample groups are discussed (e.g., "Counties said..." or "Cities (1-9) said ...") the reference is to the responding departments from one of the sample strata. It is particularly important to note that when the text or tables

refer to "All Departments" or "All Responding Departments," the reference is to all <u>responding</u> departments from the sample described in Section 1.2. This sample was <u>not</u> proportional to the total population of police departments, and although it is possible to do so, the data in this report have not been weighted to allow direct extrapolation to the total population. (See Appendix B, page B-1.)

(h) Questions which asked departments to identify manufacturers of their equipment were asked in this manner only to make the question clearer; NOT TO EVALUATE A MANUFACTURER'S PRODUCT.

#### 2.2 Discussion

#### 2.2.1 Characteristics of Respondents

#### TITLE OF RESPONDENT

All of the questionnaires in the LEAA Police Equipment Survey were mailed to the Chief or highest official of the department with a request that the questionnaires be directed to the person or persons within the department who were felt to be best qualified to answer the questions.

The Handguns Questionnaire was usually filled in by the Chief/Unit Head in Townships and smaller City departments, and by an Armorer or Ballistician in the States and Fifty Largest Cities. In Cities (50+), the primary respondents were not concentrated into any single category.

Table i. Rank of Primary Respondent for Handguns Questionnaire, by Department Type.\*

RANK/TITLE:

DEPARTMENT TYPE:

	% City 1-9	% City 10-49	% City 50+	% 50 Largest	% State	% Township
Chief	74	45	13	4	0	67
Gun Specialist	1	6	22	54	34	0
Lieutenant	4	13	15	13	11	0
Sergeant	7	11	9	9	13	15

<sup>\*</sup> Excluding Counties

Questionnaires from Counties were most often filled in by the Sheriff (49%) or Deputy Sheriff (16%).

NUMBER OF YEARS OF LAW ENFORCEMENT EXPERIENCE OF RESPONDENT

Table ii. Number of Years of Law Enforcement Experience of Respondents to the Handguns DQ, by Department Type.

DEPARTMENT TYPE:

NUMBER OF YEARS OF EXPERIENCE:

	More T 5 Year			n More Than 25 Years
State	97	86	39	. 26
City (50+)	93	74	39	19
50 Largest	92	88	40	20
City (10-49)	90	71	24	11
Township	86	53	23	19
City (1-9)	83	52	15	9
County	73	43	13	5
All Departments	88	66	26	14

In general, the questionnaire was filled in by experienced officers.

Although about two thirds of the respondents had More Than 10 Years of law enforcement experience, there were variations among Department Types:

More than 85% of respondents in the Fifty Largest Cities and States had

More Than 10 Years of experience, while half or less of the respondents in Townships, Cities (1-9), and Counties had this much experience.

#### 2.2.2 On Duty Use of Handguns

1. How many of the officers in your department use on duty, handguns of each of the following calibers? (Either as their primary or their "back-up" weapon.)							
Number of Officers	Calibers .32 Automatic .38 Special 9mm Luger .357 Magnum .45 Automatic Other (Specify)						

Both the percentages of departments in each Department Type reporting use of each caliber of handgun on duty, and the percentages of all officers in each Department Type using each caliber of handgun on duty were determined. Comparisons of these measures showed some striking contrasts. For example, while 95% of the responding County departments said that some of their officers were using some .38 handguns, only 55% of all responding County officers were using .38s. Similarly, while 15% of the Fifty Largest Cities reported using .45 caliber handguns, only 2% of the officers in that Department Type were reported to be using .45s.

Table 1-1. Percentages\* of <u>Departments</u> Having At Least One Officer
Using a Handgun of the Specified Caliber; and Percentages
of All Officers in a Particular Department Type Using
Handguns of These Calibers On Duty.

DEPARTMENT TYPE:

CALIBER:

	.38		.357 Magnum		. 45		9mm	
	%Officers	%Depts	%Officers	%Depts	%Officers	%Depts	%Officers	%Depts
F0 -			i	4.7	į	7 =	,	1.0
50 Largest	88	100	9	41	2	<b>1</b> 5	1	13
City (50+)	81	97	16	53	1	14	2	22
City (1-9)	70	93	23	51	2	8	3	5
City (10-49)	) . 68	94	26	57	2	12	2	<b>1</b> 5
State	59	87	36	66	**	6	4	15
Township	56	85	36	74	1	7	4	26
County	55	95	40	59	1	11	3	10
			İ		i			
All Depts.	80	94	17	56	1	10	1	14

<sup>\*</sup> Percentages add to more than 100%.

Almost all responding <u>departments</u> (94%) had some officers using the .38 caliber handgun on duty, and 80% of the <u>officers</u> in the responding departments were using .38s on duty. Although slightly more than half of the responding <u>departments</u> (56%) reported having some officers using the .357 Magnum, this gun was used by only 17% of their officers.

State police, Townships, and Counties reported relatively fewer officers using the .38 caliber handgun (55%-59% of officers) and relatively more officers using the .357 (36%-40% of officers) than did City Department Types.

The .45 and the 9mm were each being used by only 1% of officers in the responding departments, and by no more than 4% of the officers in any Department Type.

In answer to question 1, the 445 responding departments reported a total of 179,891 officers carrying handguns on duty. Four-fifths of those officers were carrying .38 caliber handguns, 17% were carrying .357s, 1% were carrying .45s, 1% were carrying 9mm handguns, and less than 1% were carrying handguns of any other caliber.

<sup>\*\*</sup> Less than 1%.

Table 1-2. Numbers of Officers in Responding Departments Carrying .38, .357, .45, 9mm, and Other Calibers of Handguns On Duty, by Department Type.

DEPARTMENT TYPE:

CALIBERS:

	38	.357	.45	9mm	Other
50 Largest State	106,540 25,451	11,111 15,288	2,365 84	250 1,785	513 183
City (50+)	8,409	1,620	125	171	112 15
County City (10-49)	1,639 1,293	1,194 498	30 42	82 40	23
City (1-9) Township	534 149	176 97	26 2	17 11	9 7
TOWNSHIP	149	,91	2	11	,
All Depts.	144,015	29,984	2,674	2,356	862
% TOTAL	80%	17%	1%	1%	<1%

It is probable that the relative proportions of .38s and .357s reported in Question 1 (80% and 17%, respectively) were partially attributable to the sample design: All States and all of the Fifty Largest Cities were included in the sample, but only portions of the other five Department Types were sampled.

Using these reported numbers, divided by the numbers of respondents, Department Type averages, per caliber, were computed. These averages were multiplied by the number of departments in each Department Type in the population\* to produce the estimates of the total number of handguns of each caliber in use shown in Table 1-3.

According to the <u>estimates</u> in Table 1-3, .38 caliber handguns represented about 70% of the total on duty handguns while .357s represented about 25% of the total. This moderate shift in the relative proportions of .38s and .357s was mainly a result of the extrapolation of data from County

<sup>\*</sup> See Table 1.2-2, p.4.

departments: County departments reported 55% of their officers carrying .38s and 40% carrying .357s, and Counties make up almost one-fourth of the U.S. police department population.

Table 1-3. Estimated Numbers of Officers Carrying Various Calibers of Handguns in U.S. Police Departments On Duty, by Department Type.

DEPARTMENT TYPE:

#### CALIBER:

	Estimated Number of .38s	Estimated Number of .357s	Estimated Number of .45s	Estimated Number of 9mm	Estimated Number of Other			
50 Largest	115,804	12,077	2,571	272	558			
State	27,075	16,264	89	1,899	195			
City(50+)	58,969	11,360	877	1,199	785			
County	70,432	51,309	1,289	3,524	645			
City(10-49)	28,838	11,107	937	892	513			
City(1-9)	34,875	11,494	1,698	1,110	588			
Township	8,686	5,655	117	641	408			
All Depts.	344,679	119,266	7,578	9,537	3,692			
% TOTAL	71%	25%	1%	9 <b>,</b> 557	1%			
	ESTIMATED TOTAL NUMBER IN U.S. = 484,752							

#### 2.2.3 Characteristics of Handguns Used On Duty

Ė

Respondents were asked a series of questions about the handgun that was used on duty by more of their officers than any other (Most Used Handgun, Questions 2-2E), and then these same questions were asked about the handgun used on duty by the second greatest number of officers (Second Most Used Handgun, Questions 3-3E). The questions were asked in this way so that the data could always be referenced to a particular caliber of handgun.

Fifty-eight percent of the responding departments were using more than one caliber of handgun on duty. The Fifty Largest City departments had the smallest percentage of departments (48%) using more than one caliber of handgun on duty and Townships had the highest percentage (70%).

Table 2A/3A-1. Percentages of Departments With Officers Using More Than One Caliber of Handgun On Duty, by Department Type.

DEPARTMENT TYPE:	% Responding Departments
Township	70
State	64
City (50+)	62
County	60
City (10-49)	58
City (1-9)	51
50 Largest	48
All Departments	58

- 2. and 3. Select from the list in Question 1 the handgun that is "used, on duty, by more of your officers than any other."/ "second most often used by your officers." COMPLETELY FILL IN THE QUESTIONS BELOW FOR THAT HANDGUN.\*
  - 2A. & 3A. Caliber Type.
  - 2B. & 3B. How many are revolvers?
    How many are automatics?
  - 2C. & 3C. List below each different model of this "most used"/"second most used" handgun now used in your department. (IDENTIFY EACH DIFFERENT MODEL BY BOTH MANUFACTURER AND MODEL NAME OR MODEL NUMBER.)
  - 2D. & 3D. Barrel Lengths:

    How many have barrels of less than 3 inches?

    How many have barrels of 3-5 inches?

    How many have barrels of more than 5 inches?
  - 2E. & 3E. Ammunition: In the table below, list each type of ammunition that your officers use with this "most used"/"second most used" handgun. (FILL IN THE TABLE BELOW FOR EACH TYPE OF AMMUNITION USED)

Bullet Type
Bullet Weight (in grains)
Manufacturer

\*SEE APPENDIX A, pp. A-3 to A-5, FOR ACTUAL QUESTION PRESENTATION.

#### 2.2.3.1 Caliber

2A. & 3A. Caliber Type.

(FOR MOST USED AND SECOND MOST USED HANDGUN)

Ninety-nine percent of the handguns\* reported in Questions 2 and 3 were either .38 caliber (82%) or .357 caliber (17%). Only eight of the 445 departments (2%) said that a caliber other than .38 or .357 was used by more of their officers than any other; four cited the 9mm as Most Used and four cited the .45 caliber as Most Used.

Table 2A/3A-2. Percentages of Handguns Cited as Most Used or Second Most Used, by Caliber.

CALIBER:	+	% <u>Handguns</u> Reported in Qs. 2 and 3
		(n = 180, 256)
.38		. 82
.357		17
9mm'		1
. 45		1
.22		**
.32		**
.44		**
. 25		**

<sup>\*\*</sup> Less than 1%

Given these findings, it is not surprising that when the .38 caliber was listed as Most Used Handgun, the .357 was the most likely caliber to be listed as the Second Most Used Handgun, and vice versa. States reported the highest percentage of departments in which the .357 was used by more officers

<sup>\*</sup> The total numbers of handguns reported in Qs. 2 and 3 were slightly greater than the numbers of officers carrying handguns reported in Q. 1 (180,256 and 179,891, respectively). In addition, there were a few "Third," "Fourth," etc., "Most Used Handguns" that should not have been reported in Qs. 2 and 3. Both of these errors combined, however, represented less than 1% of all the handguns in the responding departments.

than any other caliber; 45% of States said the .357 was Most Used. The Fifty Largest Cities reported the highest percentage of departments in which the .38 was used by more officers than any other caliber; 89% of the Fifty Largest Cities said the .38 was Most Used.

Table 2A/3A-3. Caliber of "Most Used" and "Second Most Used" Handgun, by Department Type.

DEPARTMENT TYPE:	MOST USED HANDGUN IN DEPARTMENT:		SECOND MOST USED HANDGUN IN DEPARTMENT:			
	.38 Caliber	.357 Caliber	.38 Caliber	.357 Caliber		
	$\frac{\text{% Depts.}}{(n = 445)}$	% Depts. (n = 445)	% Depts. (n = 259)	% Depts. (n = 259)		
50 Largest	. 89	11	23	64		
City (50+)	80	19	29	51		
City (1-9)	76	20	33	53		
County	74	25	32	57		
City (10-49)	71	27	38	50		
Township	67	33	21	47		
State	53	45	53	33		
All Departments	74	24	34	51		

<sup>\*</sup> Most Used Handgun percentages were based on all respondents. Second Most Used Handgun percentages were based on the 259 respondents listing a second handgun.

Half of the reporting 328 departments in which there were more .38s in use on duty than any other caliber were using the .38 exclusively for on duty service (reported no Second Most Used Handgun). Only 17% of the departments in which the .357 was reported as the Most Used on duty gun were using the .357 exclusively.

Table 2A/3A-4. Of Those Departments Citing the .38 and the .357 as Their Most Used Handguns, the Percentages Listing .38/.357, Another Caliber, or No Second Most Used Handgun.

OF DEPARTMENTS WHOSE MOST USED HANDGUN WAS:

# THEIR SECOND MOST USED HANDGUN WAS:

	<b>% .38</b>	% .357	% Other	<pre>% Using Most Used Handgun Exclusively</pre>
.38 $(n = 328)$		40	10	50
.357 $(n = 109)$	77		7	17
All Calibers (n = 445)	19	30	9	42

- The remainder of the discussion of Questions 2-2E and 3-3E
- will focus on the data for Most Used Handgun (Qs. 2-2E), since
- these data represent over 90% of the handguns reported. Only \*
- \* in cases in which differences appear will the data for Second \*
- $_{\star}$  Most Used Handgun (Qs. 3-3E) be discussed, even though data for
- \* Second Most Used Handguns will be presented in the text tables.
- \* Full tables for all questions appear in Appendix B. \*

# 2.2.3.2 Revolvers Automatics

2B. and 3B. How many are revolvers?

How many are automatics?

(FOR MOST USED AND SECOND MOST USED HANDGUN)

Since the vast majority of reported handguns were either .38 caliber or .357 caliber, it follows that almost all (99%) of the reported handguns were revolvers (only eleven .38 caliber automatics were reported, and no .357 caliber automatics were reported). Within every Department Type, 95% or more of the Most Used Handguns were revolvers. For those Most Used Handguns which

were automatics, only 9mm, .45, and .38 were cited. For Second Most Used, .32, .22, and .25 automatics were also cited.

Table 2B/3B. Percentages of MOST USED HANDGUNS and SECOND MOST USED HANDGUNS Which Were Revolvers, by Department Type.

DEPARTMENT TYPE: MOST USED SECOND MOST HANDGUNS: USED HANDGUNS:

	Total No. Reported	% Revolver	Total No. Reported	% Revolver
50 Largest State	111,928 38,618	100 96	7,398 6,087	100 98
City (50+)	9,346	99	1,168	94
County City (10-49)	2,338 1,532	100 98	523 307	99 93
City (1-9)	563	95	142	92
Township	213	100	43	77
All Depts.	164,588	99	15,668	98

#### 2.2.3.3 Model/Manufacturer

Almost all of the "Most Used Handguns" reported by the responding departments were produced by only two manufacturers. Although it was not possible to determine what percentages of <a href="handguns">handguns</a> in use were made by various manufacturers, the data show that 97% of the <a href="departments">departments</a> listed one or both of two manufacturers, and did not list any other manufacturer

for their Most Used Handgun. At least 92% of the departments in every

Department Type were using those two manufacturers exclusively for their

Most Used Handguns.

Table 2C-1. Percentages of Responding Departments Using Handguns of Specified Manufacturers as Their Most Used Caliber Handgun, by Department Type.

MANUFACTURER	DEPARTMENT TYPE:							
	%A11	% 50	%	%City	%City	%City	%	96
	Depts.	Largest	State	50+	10-49	1-9	County	Township
2	91	100	96	95	88	88	85	83
1	50	57	45	61	49	C٦	47	56
Other	3	0	2	1	8	1	5	4

A great number of different models were represented among departments.

Most Used Handguns. About two-fifths of all responding departments and 67% of the Fifty Largest Cities had some of one model made by Manufacturer 2 represented among their Most Used guns. The four models with the highest percentages of departmental representation were all made by one manufacturer.

The .357 model with greatest representation was also made by this manufacturer.

2D. and 3D. Barrel Lengths:

How many have barrels of less than 3 inches?

How many have barrels of 3-5 inches?

How many have barrels of more than 5 inches?

(FOR MOST USED AND SECOND MOST USED HANDGUN)

Overall, 80% of the 180,256 handguns reported in Questions 2D and 3D (data for Most Used and Second Most Used combined) had barrels of 7.6-12.7 cm (3-5 in.), 10% were less than 7.6 cm (3 in.), and 10% more than 12.7 cm (5 in.). Within the seven Department Types, about the same proportion of handguns had 7.6-12.7 cm barrels, with one exception: a smaller proportion

of the handguns reported by State departments (61%) had barrels 7.6-12.7 cm long, and States reported a much higher percentage (29%) of handguns with barrels more than 12.7 cm long.

Table 2D/3D-1. Percentages of Most Used and Second Most Used Handguns With Barrels of Various Lengths, by Department Type.

DEPARTMENT TYPE:

#### BARREL LENGTH:

	% Handguns 7.6-12.7 cm	% Handguns Less Than 7.6 cm	% Handguns More Than 12.7 cm
50 Largest(n=119,326)	87	9	4
City 1-9 (n=755)	86	9	5
City 10-49(n=1839)	82	10	8
Township(n=256)	78	16	5
City 50+(n=10,514)	77	17	5
County (n=2816)	77	17	5
State(n=44,705)	61	10	29
All Depts. (n=180,256)	80	10	10

Data from Question 2D (Most Used Handgun, n = 164,598, 91% of total) showed differences in barrel lengths among the various calibers of handguns. The proportions of .38 caliber handguns of each length closely parallel the proportions of all handguns taken together. In contrast, 100% of the 9mm handguns reported had 7.6-12.7 cm barrels, 91% of the .45s had barrels of this length, and 89% of the .357s had barrels of this length.

Table 2D. Percentages of <u>Most Used</u> Caliber Handguns of Various Calibers With Barrels of Specified Length. (164,588 Handguns, Q. 2A.)

REPORTED
BARREL LENGTH:

#### CALIBER OF HANDGUN:

-	.38	% .357 (n=18,652)	% 9mm (n=1788)	% .45 (n=44)
Less Than 3 Inches (7.6 cm)	10	2	0	0
3-5 Inches (7.6-12.7 cm)	80	89	100	91
More Than 5 Inches (12.7 cm)	10	9	0	9

Two calibers of handguns with greatest representation (.38 and .357) were examined in greater detail. Table 2A/3A-4 (p. 11) showed that, in general, one of these two calibers would be used by more officers in a department than any other caliber, and that the other would be used by the next greatest number of officers. Of the .38s that were listed as Most Used Handguns, 80% had barrels of 7.6-12.7 cm. Of the .38s that were listed as Second Most Used Handguns, more than half (53%) had barrels of less than 7.6 cm. Roughly these same proportions were found in all Department Types except States (Most Used .38s) and Cities with 1-9 Officers (Second Most Used .38s). For exact numbers, see Appendix B.

Of the .357 handguns cited as <u>Most Used</u>, 89% had barrels of medium length. Approximately this same percentage was found in six of the seven Department Types for the .357s that were listed as <u>Second Most Used Handguns</u>. However, the overall percentages for Second Most Used .357s were greatly affected by State departments: 64% of the .357 Second Most Used Handguns in States had barrels of more than 12.7 cm.

Table 2D/3D-2. Percentages of .38 and .357 Caliber Handguns With Barrels of Each Specified Length, When They Were Most Used and Second Most Used Handguns.

REPORTED
BARREL LENGTH:

CALIBER:

	.38		.357	
	Most Used	Second Most	Most Used	Second Most
	(n=144,104)	(n = 3943)	(n=18,652)	(n = 11,381)
Less Than 3 Inches (7.6 cm)	10	53	2	2
3-5 Inches (7.6-2.7 cm)	80	45	89	73
More Than 5 Inches (12.7 cm)	10	2	9	26

#### 2.2.4 Characteristics of Ammunition Used

2E.and 3E. Ammunition: In the table below, list each type of ammunition that your officers use with this "most used"/"second most used" handgun. (FILL IN THE TABLE BELOW FOR EACH TYPE OF AMMUNITION USED)

> BULLET WEIGHT BULLET TYPE MANUFACTURER (IN GRAINS)

(FOR MOST USED AND SECOND MOST USED HANDGUN)

#### 2.2.4.1 Bullet Type

Almost half (49%) of the responding departments were using Lead bullets in their Most Used Handguns. About one-fourth were using Hollowpoint, and 15% were using Jacketed ammunition.

Table 2E/3E-1. Percentages\* of Departments Using Each Specified Bullet Type in Their Most Used and Second Most Used Handgun.

BULLET TYPE:	MOST USED HANDGUN:	SECOND MOST USED:
	% Depts. (n = 445)	% Depts. (n = 259)
Lead	49	43
Hollowpoint	24	27
Jacketed	15	15
Soft Point	10	11
Wadcutter	6	3
Semi Wadcutter	3	2
Metal Piercing	2	**
Unusable Information	16	14
No Answer	1	2

<sup>\*</sup> Percentages add to more than 100% since multiple answers were allowed. \*\* Less than 1%.

About two-thirds of the respondents reported using bullets of only one type in their Most Used Handgun. About half of these departments said they used Lead bullets exclusively. Thirteen percent reported using Hollowpoint exclusively.

Table 2E/3E-2.\* Of the Departments Using Only One Type of Bullet for Their Most Used and Second Most Used Handguns,
Percentages Using Specified Bullet Type.

BULLET TYPE:	MOST USED HANDGUN:	SECOND MOST USED:
	% Depts.	% Depts.
1	(n = 292)	(n = 138)
Lead	<b>4</b> 9	41
Hollowpoint	13	18
Soft Point	6	5
Jacketed	4	4
Ball	4	2
Lubaloy	3	4
Wadcutter	2	1
Semi Wadcutter	1	1
Metal Piercing	1	4
Frangible	0	1
Other	1	4
Unusable Information	14	12

## 2.2.4.2 Bullet Weight

About three-fourths of the responding departments reported using ammunition with bullet weights of 151-150 grains (978.5 mg - 1036.8 mg), and very few departments were using ammunition with bullet weights higher than this. About 17% were using ammunition with bullet weights of 654.5 mg - 712 mg (101-110 grains), and 12% with weights of 913.7 mg - 972.0 mg (141-150 grains).

<sup>\*</sup> This table was compiled by special tabulation and does not appear in Appendix B.

Table 2E/3E-3. Percentages\*of Departments Using Ammunition for Their Most Used and Second Most Used Handguns With Specified Bullet Weights.

REPORTED BULLET		
WEIGHT IN GRAINS:	MOST USED HANDGUN:	SECOND MOST USED:
	Fig. 2	
	% Depts.	% Depts.
	(n = 445)	(n = 259)
151-160 (978.5 - 1036.8 mg)	73	57
101-110 (654.5 - 712.8 mg)	17	17
141-150 (913.7 - 972.0 mg)	12	10
121-130 (784.1 - 842.4 mg)	7	9
191-200 (1237.2 - 1296.0 mg)	6	5
**		

<sup>\*</sup> Percentages add to more than 100% since multiple answers were allowed.

#### 2.2.4.3 Ammunition Manufacturer

About half of the 445 responding departments (53%) were using at least some ammunition made by Manufacturer 8 with their Most Used Handgun. About a third (34%) were using ammunition by Manufacturer 16, 17% were using ammunition of Manufacturer 12.

Table 2E/3E-4. Percentages\* of Departments Using Ammunition Made by Each Specified Manufacturer with Their Most Used and Second Most Used Handgun.

MANUFACTURER NO:	MOST USED HANDGUN:	SECOND MOST USED:
	$\frac{\text{% Depts.}}{(n = 445)}$	% Depts. (n = 259)
8	53	49
16	34	31
12	17	20
10	11	7
**		

<sup>\*</sup> Percentages add to more than 100% since multiple answers were allowed.

<sup>\*\*</sup> Percentages of departments in all other categories were 5% or less.

<sup>\*\*</sup> Percentages of departments using each other brand were 5% or less.

More than half (n-263, 59%) of the responding departments reported using only one brand of ammunition with their Most Used Handguns. Fifty percent of these departments said they were using that of Manufacturer 8 exclusively. About one-fourth (22%) reported using Manufacturer 16 exclusively. Less than 10% were using any other brand exclusively.

Of the 109 departments (42% of the 259 reporting a second handgun) reporting use of only one manufacturer's ammunition for their Second Most Used Handgun, 42% reported using the product of Manufacturer 8, 26% of Manufacturer 16, and 14% of Manufacturer 12.

Table 2E/3E-5. Of the Departments Using Only One Brand of Ammunition with Their Most Used and Second Most Used Handgun, Percentages Using Each Specified Brand of Ammunition.

MANUFACTURER NO:	MOST USED HANDGUN:	SECOND MOST USED:
	$\frac{\text{% Depts.}}{(n = 263)}$	% Depts. (n = 109)
8	50	42
16	22	26
10	9	4
12	9	14
4		

<sup>\*</sup> Percentages of departments using each other brand were less than 10%.

#### 2.2.5 Off Duty Use of Handguns

	how many of the officers in your each of the following calibers
NUMBER OF OFFICERS	CALIBER
	.22 LR .25 Automatic .32 Automatic .38 Special 9 mm Lugar .357 Magnum .45 Automatic Other (Specify) Other (Specify)

Only 78% of the 445 departments which provided data about their officers' use of handguns on duty (Q. 1) answered this question. Their answers accounted for 62% of the 179,091 "officers carrying handguns on duty" reported in Q. 1.

Some of the 100 departments which did not report off duty use of handguns made such comments as "Off duty officers use weapons of their choice.",
and "No off duty officers." Therefore, these data cannot be taken as a
measure of proportion of officers that carry weapons off duty. The data
can be used, however, to indicate the proportions of various calibers of
handguns used off duty as compared with those used on duty.

About one-fourth of the departments not reporting off duty weapons
were State departments: 51% of the States gave "No Answer". About 75% or
more of the departments in all other Department Types did answer Question 4.

Table 4. Percentages of Departments in Each Department Type Which Did Not Report Officers' Use of Handguns Off Duty.

DEPARTMENT TYPE:	% Departments "None"/"No Answer"
State	51
City (1-9)	26
50 Largest	22
Township	22
City (50+)	18
City (10-49)	15
County	15
All Departments	22

The 345 departments which reported off duty handgun use were using .38 caliber handguns in about the same proportion as was reported for on duty use in Q. 1: 94% of all responding departments had at least one officer using the .38 on duty, and 96% of the 345 departments describing off duty handguns had at least one .38 in use off duty. In addition, about the same proportions of officers were using the .38 on duty and off duty: 80% and 86%, respectively.

There was one major difference between on duty and off duty handgun use: Only four different calibers of handguns were reported to be in use on duty by 10% or more of the responding departments; but eight different calibers were reported to be in use off duty by 10% or more of the departments that reported off duty use. As with on duty use, however, the percentages of officers using each of these different calibers was small; the majority of officers used the .38 on duty and off duty.

Table 4/1. Percentages of Officers and Percentages of Departments\*
Using Specified Calibers of Handguns On Duty and Off Duty.

OFFICERS: DEPARTMENTS: CALIBER: % Depts. % Officers % Officers % Depts. On Duty Off Duty Off Duty On Duty (n = 445) (n = 345)(n = 179,891)(n = 110,534)86 .38 94 96 80 .357 56 29 6 . . . 17 4 9 mm 14 30 .45 Auto. 10 21 1 2 .32 Auto. 3 22 \*\* 1 \*\* .25 Auto. 3 23 1 3 15 1 .22 .44 2 1 \*\* ++ .380 2 4 10 \*\* .41 2 \*\* \*\* .32 Revolver 1 1 \* \* ++ \*\* .45 Revolver 1 0 0 \*\* \*\* \*\* Other \*\*

#### 2.2.6 Problems With Handguns

5. When you think of all the handguns that have been used by any of your officers in the last 5 years; which of these guns have had, or have caused problems of one kind or another?

Be sure to think of handguns that were once used but are not now used, as well as handguns that are now used. IN THE SPACES PROVIDED BELOW TELL US ABOUT THE HANDGUN AND THE "PROBLEM".

#### CASE NUMBER 1

Caliber

Revolver or Automatic

Manufacturer

Model

Barrel Length

What was the problem?

CASE NUMBER 2

(etc.)

CASE NUMBER 3

(etc.)

<sup>\*</sup> Percentages of departments add to more than 100% since there could be more than one caliber of handgun in each department.

<sup>\*\*</sup> Less than 1%.

More than half (55%) of the responding departments either said they had had "no problems" with their handguns in the last 5 years or left the question blank. There were striking differences among the seven Department Types, however: Almost three-fourths of the States and Fifty Largest Cities cited one or more problems, but only about one-fourth of the Counties and Cities (1-9) described problems.

Table 5-1. Percentages of Departments in Each Department Type
Listing at Least One Handgun Problem.

DEPARTMENT TYPE:	% Dept. Types Citing One or More Problems
State	72
50 Largest	72
City (50+)	53
City (10-49)	47
Township	41
County	29
City (1-9)	24
All Departments	45

Among the 203 departments that described at least one problem, those problems associated with the Cylinder were mentioned most frequently (35%). The Hammer/Firing Pin was reported to have been involved in the handgun problems of about one-fifth of the departments mentioning problems.

Table 5-2. Of the 203 Departments Which Listed at Least One Problem,
Percentages Citing Specified Problem.

PROBLEM:	% Departments* (n = 203)
Cylinder	35
Hammer/firing pin	21
Misfires	15
Trigger	11
Age, wear and tear	11
Abuse by personnel	10
Accidental discharge	10
Main springs	9
Problems on double or single action	9
Ammunition problems	8
Problems with Finish (Bluing)	8
Jamming	8
Shaving Lead	8
Timing Problems	8
Problems with Reliability/Defective Manufacturing	7
Head Space Problems	6
Barrel Problems	5
Ejector Rod Problems	4
Feeding Problems	4
Other	24

<sup>\*</sup> Percentages add to more than 100% since departments could describe more than one problem.

Each of the problem descriptions, categorized by manufacturer, was recorded verbatim along with the caliber, manufacturer/model, barrel length, and type of handgun. No cross tabulations were made with these identifying factors, however, because the various calibers, manufacturers, even, were disproportionately represented among the departments. Cross tabulations with these identifiers would have reflected this departmental representation rather than problems associated with a particular model, caliber, barrel length, etc.

#### Examples of Cylinder Problems Mentioned Were:

"Shaved lead, cylinder had excess play."

Weapon bought new and used approximately 3 months."

#### Examples of Hammer/Firing Pin Problems Mentioned Were:

- "Crystallized hammers, weak main spring, crystallized firing pin."
- "Firing pin spring too weak."
- "Hammer springs of marginal strength and would not fire primers at all times."

#### 2.2.7 Problems Associated With Handgun Ammunition

6. How about handgun ammunition: Have your officers found any problems with any handgun ammunition that they have used in the last 5 years?

Again, be sure to think of handgun ammunition that was once used but is not now used, as well as ammunition that is now used. IN THE SPACES BELOW TELL US ABOUT THE AMMUNITION AND THE "PROBLEM".

CASE NUMBER 1

Caliber

Cartridge

Bullet Type

Bullet Weight

Manufacturer

What was the problem?

CASE NUMBER 2

(etc.)

CASE NUMBER 3

(etc.)

A smaller percentage of the responding departments reported problems with handgun ammunition (26%) than reported problems with handguns (45%). A much higher percentage of the Fifty Largest Cities (61%) reported ammunition

<sup>&</sup>quot;Cylinder would not rotate when hammer was cocked.

<sup>&</sup>quot;After carrying this gun in a holster for several years, the rotating mechanism wears so much that the bullets do not line up with the barrel, causing a spray of lead to fly out the side of the chamber."

problems than any other Department Type. None of the 27 Township departments and only 7 of the 84 City (1-9) departments listed an ammunition problem.

Table 6-1. Percentages of Departments in Each Department Type Reporting at Least One Problem With Handgun Ammunition.

DEPARTMENT TYPE:	%	Dept. Type
50 Largest		61 45
City (50+)	1 **	43
County		18
City (10-49)		16
City (1-9)		8
Township		0 '
All Departments		26

Among the 117 departments that described an ammunition problem, three problems were cited by more than one-fourth of the departments: Power/Penetration Too Low (30%); Knockdown Power Insufficient (27%); and Primer (25%). A wide variety of other problems was also mentioned.

Table 6-2. Of the 117 Departments Citing at Least One Problem with Handgun Ammunition, Percentages\* Citing Each Specified Problem.

PROBLEM: % Depar	tments
(n =	: 117)
Power/penetration too low	30
Knockdown power insufficient	27
Primer	25
Case, Cartridge	21
Wrong amount of powder	17
Gun failure	15
Penetration too great	9
Accuracy poor	5
Leading, Fouling	5
Richochet	5
Smoking excessive	3
Variability of energy rates	3
Powder/Misc. problems	3
Other	14

<sup>\*</sup> Percentages add to more than 100% since multiple answers were allowed.

A cross tabulation was performed for those departments which said they used reloaded ammunition for either their Most Used or their Second Most Used Handgun (Qs. 2E and 3E). Of these 52 departments, 56% cited ammunition problems as compared to 26% of all the responding departments. (It is likely that more departments were using reloaded ammunition than reported that fact in either Q. 2E or Q. 3E.)

As with handgun problems, each ammunition problem was recorded verbatim along with the identifiers listed in Question 6. Again, the disproportionate representation of certain calibers, cartridge types, manufacturers, etc., precluded cross tabulation of these identifiers.

#### Examples of Power/Penetration Too Low Were:

#### Examples of Knockdown Power Insufficient Were:

#### Examples of Primer Problems Were:

<sup>&</sup>quot;Lack of penetration."

<sup>&</sup>quot;Would not penetrate windshields; as a result an officer was almost run over by a felon."

<sup>&</sup>quot;Lack of penetration on autos and ricocheting."

<sup>&</sup>quot;Poor stopping power."

<sup>&</sup>quot;Bullet would go through person but would not stop or immediately disable them."

<sup>&</sup>quot;The street officers frequently complain that this bullet fails to have adequate "knock-down" power desirable in a face to face shoot out. Penetration is great, but cavitation is poor on this type bullet."

<sup>&</sup>quot;Dead primer, unknown cause of defect."

<sup>&</sup>quot;Arrived from the manufacturer with blown primers."

<sup>&</sup>quot;Bad primers."

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U.S. Department of Commerce National Bureau of Standards

DETAILED QUESTIONNAIRE:

HANDGUNS AND

HANDGUN AMMUNITION

## POLICE EQUIPMENT SURVEY

Sponsored By:

National Institute of Law Enforcement and Criminal Justice Law Enforcement Assistance Administration U.S. Department of Justice

Directed and Conducted By:

Behavioral Sciences Group National Bureau of Standards Washington, D.C. 20234 Phone: 301-921-3558 INTRODUCTION: Police officers in several departments have told us informally about their problems in selecting and using handguns. They have told of the danger to their officers from poor handguns and handgun ammunition. In order to make it easier for law enforcement departments to select and buy handguns and handgun ammunition to meet their particular needs, the Law Enforcement Standards Laboratory will be writing voluntary performance standards for these items of equipment.

PURPOSE OF THIS QUESTIONNAIRE: The purpose of this "detailed" questionnaire is to get answers from YOU, the user, about the handguns and handgun ammunition you are now using, and the problems you find in using them. Your answers will be used to determine what kinds of testing need to be done, and what sorts of problems must be solved. We must find out what YOUR needs are.

#### GENERAL INSTRUCTIONS:

- 1. Fill in the questionnaire completely. Even if you do not have all the information you need "at your fingertips," please make your best effort to supply every answer AS ACCURATELY AS POSSIBLE.
- 2. Answer all questions for YOUR OWN DEPARTMENT. Do not attempt to supply information that might exist in some other department.
- 3. The results of this questionnaire will be compiled by computer. It is very important that you follow directions and answer every question legibly and in the boxes and spaces provided.
- 4. No individual department will be identified in the report of this survey; the results will be published in tabulated form.
- 5. Additional instructions for filling in your answers appear after some questions. Follow the directions given.
- 6. Please PRINT all answers and comments CLEARLY.
- 7. When this questionnaire has been completely filled in; place it, with the other questionnaires sent to your department, in the stamped, addressed envelope supplied. Return all of them to:

Technology Building, Room Allo National Bureau of Standards Washington, D.C. 20234

- 8. If you have any questions, write to the above address or call collect:

  E. Bunten, or P. Klaus
  Phone: 301-921-3558
- 9. Remember that it is only by getting YOUR answers to these questions that it will be possible to begin solving the problems that police have with handguns and handgun ammunition.

# PART I: ON DUTY USE OF HANDGUNS AND HANDGUN AMMUNITION.

1. How many of the officers in your department use, on duty, handguns

		of the following ack-up" weapon.)	calibers?	(Either as	their primar	ry or
	NUMBER OF	₹	•			
14	OFFICERS	CALIBER				
(10-14)***	k	.32 Automatic		7		
(15-19)		.38 Special				
(20-24)	-	9 mm Luger				
(25-29)		.357 Magnum	- 4	71	100	
(30-34)	-	.45 Automatic				
(35-39)	78	Other (Specify)	),			
		Other (Specify)				
2.	duty, by	rom the list in of more of your of JESTIONS BELOW FO	ficers than	any other.		
(40-42)	27 0-1		t gifts som tills			
	2A. Cali	iber Type.				
(43-47)	2B. How	many are revolve	ers?			
(48-52)	How	many are automa	tics?			
	now,	t below each dif used in your de BOTH MANUFACTURE	partment.	(IDENTIFY E	ACH DIFFERENT	
		MANUFACTURER		MODE1	L/MODEL NUMBI	ER
(53-56)	a					
(57-60)	b					
(61-64)	c					
(65-68)	d					
(69-72)	e			·		
(73-76)	f					
(77-80)	g				·	
(10-13)	*** Numbe	rs in parenthese	s are for c	omputer use	only.	

(14-18)	How many have barrels of less than 3 inches?
(19-23)	How many have barrels of 3-5 inches?
(24-28)	How many have barrels of more than 5 inches?
2E.	Ammunition: In the table below, list each type of ammunition
	that your officers use with this "most used" handgun. (FILL IN THE TABLE BELOW FOR EACH TYPE OF AMMUNITION USED)
	BULLET TYPE BULLET WEIGHT MANUFACTURER
	(IN GRAINS)
(29-35)	
(36-42)	
(43-49)	
(50-56)	
(57 <b>-</b> 63)	
(64-70)	·
(71-77)	

2D. Barrel Lengths:

(78-14)

3. Go back to the list in Question 1 and pick out the handgun that is second most often used by your officers. COMPLETELY FILL IN THE QUESTIONS BELOW FOR THAT HANDGUN.

ŽOD	511011		on Lore	111111	114 114.	DOULT.		
		2.40		1500	1 ,			
SECOND	MOST	USED I	HANDGUN	<u>:</u>	. : .		,	

(15-17)	3A.	Caliber Type:
(18-22)	3B.	How many are revolvers?
(23-27)		How many are automatics?
	3C.	List below each different model of this "second most used" handgun now used in your department. (IDENTIFY EACH DIFFERENT MODEL BY BOTH MANUFACTURER AND MODEL NAME OR MODEL NUMBER)
		MANUFACTURER MODEL/MODEL NUMBER
(28-31)		a
(32-35)		b
(36-39)		C
(40-43)		d.
(44-47)		e.
(48-51)		f
N.	3D.	Barrel Lengths:
(52-56)	prince to	How many have barrels of less than 3 inches?
(57-61)	/ % ~ · ·	How many have barrels of 3-5 inches?
(62-66)	9-100,	How many have barrels of more than 5 inches?
<b>.</b> .	3E.	Ammunition: In the table below, list each type of ammunition that your officers use with this "second most used" handgun. (FILL IN THE TABLE BELOW FOR EACH TYPE OF AMMUNITION USED)
		BULLET TYPE BULLET WEIGHT MANUFACTURER (IN GRAINS)
(67-73)		
(74-80)		
(10-16)		
(17-23)		

# PART II: OFF DUTY USE OF HANDGUNS.

4. How about off duty: about how many of the officers in your department use handguns of each of the following calibers when they are off duty?

	NUMBER OF OFFICERS	CALIBER	
(24-28)		.22 LR	
(29-33)		.25 Automatic	
(34-38)		.32 Automatic	
(39-43)		.38 Special	
(44-48)		9 mm Luger	
(49-53)		.357 Magnum	
(54-58)		.45 Automatic	
(59–63)		Other (Specify)	
		Other (Specify)	

#### PART III: PROBLEMS OF HANDGUNS

5. When you think of all the handguns that have been used by any of your officers in the last 5 years; which of these guns have had, or have caused problems of one kind or another?

Be sure to think of handguns that were once used but are not now used, as well as handguns that are now used. IN THE SPACES PROVIDED BELOW TELL US ABOUT THE HANDGUN AND THE "PROBLEM".

(64)	******	****
CASI	E NUMBER 1	
(65 <b>-</b> 67)	Caliber	
(68)	Revolver or Automatic	
(69-70)		
(71-72)	Model	
(73)	Barrel Length	
	What was the problem?	
	4 4 13	
		-
	NAPP.	. 1
		· 1
		es.
	And the second s	
	*	-
	********	****

CAS	E NUMBER 2	
(76-78)	Caliber	b <sub>ea</sub> r
	Revolver or Automatic	
(10-11)	Manufacturer	
	Model	
	Barrel Length	
(15-16)	What was the problem?	
	*****	
CASI	**************************************	
(17–19)	E NUMBER 3	
(17 <b>-</b> 19)	Caliber	
(17-19) (20) (21-22)	Caliber  Revolver or Automatic  Manufacturer	
(17-19) (20) (21-22) (23-24)	Caliber  Revolver or Automatic	
(17-19) (20) (21-22) (23-24)	Caliber  Revolver or Automatic  Manufacturer  Model	
(17-19) (20) (21-22) (23-24) (25)	Caliber  Revolver or Automatic  Manufacturer  Model  Barrel Length	
(17-19) (20) (21-22) (23-24) (25)	Caliber  Revolver or Automatic  Manufacturer  Model  Barrel Length	
(17-19) (20) (21-22) (23-24) (25)	Caliber  Revolver or Automatic  Manufacturer  Model  Barrel Length	

\*\*\*\*\*

## PART IV: PROBLEMS ASSOCIATED WITH HANDGUN AMMUNITION

6. How about <a href="handgun ammunition">handgun ammunition</a>: Have your officers found any problems with any handgun ammunition that they have used in the last 5 years?

Again, be sure to think of handgun ammunition that was once used but is not now used, as well as ammunition that is now used. IN THE SPACES BELOW TELL US ABOUT THE AMMUNITION AND THE "PROBLEM".

(28)	*****
CASI	E NUMBER 1
(29-31)	Caliber
	Cartridge
	Bullet Type
	Bullet Weight
(39-40)	Manufacturer
	What was the problem?
	*
	· · · · · · · · · · · · · · · · · · ·

CAS	E NUMBER 2	
(43-45)	Caliber	
(46-47)	Cartridge	
(48-49)	Bullet Type	
(50-52)	Bullet Weight	
(53-54)	Manufacturer	
(55-56)	What was the problem?	
	·	
	******	
CASI		
	E NUMBER 3	
(57–59)	E NUMBER 3 Caliber	
(57 <b>-</b> 59)	Cartridge	
(57 <b>-</b> 59) (60 <b>-</b> 61) (62 <b>-</b> 63)	CaliberCartridgeBullet Type	
(57-59) (60-61) (62-63) (64-66)	Caliber  Cartridge  Bullet Type  Bullet Weight	
(57-59) (60-61) (62-63) (64-66) (67-68)	Caliber Cartridge Bullet Type Bullet Weight Manufacturer	
(57-59) (60-61) (62-63) (64-66) (67-68)	Caliber  Cartridge  Bullet Type  Bullet Weight	
(57-59) (60-61) (62-63) (64-66) (67-68)	Caliber Cartridge Bullet Type Bullet Weight Manufacturer	
(57-59) (60-61) (62-63) (64-66) (67-68)	Caliber Cartridge Bullet Type Bullet Weight Manufacturer	
(57-59) (60-61) (62-63) (64-66) (67-68)	Caliber Cartridge Bullet Type Bullet Weight Manufacturer	

\*\*\*\*\*\*

IDENTIFYING INFORMATION: (All identifying information will be kept confidential)

Name of 1	Department:	
	person who answered this question	onnaire:
	Title:	Rank:
	No. of years experience in law	enforcement:
	Telephone Number:	
Others w	no helped: 1.	
	Title:	Name Rank:
	No. of years experience in law	enforcement:
	Telephone Number:	
	2.	
	Title:	Name Rank:
	No. of years experience in law	enforcement:
	Telephone Number:	

#### APPENDIX B

### DATA TABLES

# B.1 Advice to the Reader

- (a) The data presented in the following tables resulted from the responses of a stratified random sample (see Section 1.2) of police departments in response to a specific set of questions (see Appendix A). These data do not, in any way, reflect objective testing of any of the equipment by the National Bureau of Standards. The reader is cautioned to become familiar with the questionnaire and to evaluate the data in terms of the exact questions asked.
- (b) Tables have been numbered after the question number (e.g., the tables for Question 6A. would be numbered 6A-1, 6A-2, etc.). The data are usually presented by number of respondents and nearest whole percentage. Because of the statistical limitations imposed by the sample sizes used in this study, the reader is cautioned to be wary of assigning importance to percentage differences of less than 5% when percentages are based on all respondents, and to percentage differences of less than 10% when percentages are based on one of the subsample groups, (e.g., a particular Department Type or Region). No statistical tests of significance are reported.
- (c) These tables are based on the responding departments from the specific sample selected for this questionnaire. This sample was not proportional to the total population of police departments, and although it is possible to do so, the data in these tables have not been weighted to allow direct extrapolation to the total population.
- (d) In order to extrapolate to the total population from the respondent data presented in this report, use the following procedure: For each Department Type, multiply the percentage of respondents of a particular Department Type giving the answer of interest (See B.2 Data Tables, Appendix B) by the total number of departments of that Department Type in the population (See Table 1.2-2, Section 1.2); add those seven subtotals; and divide the total by the total number of police departments in the population (Table 1.2-2). The quotient of this division will be an estimate of the percentage of all U.S. police departments that would choose the answer of interest.

## B.2 Data Tables

	TOWNSHIP	• 0 2	18 6	0	0	0	0	-	0	0	-	7	0	0	T 7	~	0	0	0	27 10
	FIFTY LARGEST CITIES	% *	2									0								66 94
	CITY (50 OR WORE OFFICERS)	* 07										0								79 100
T TYPE	CITY (10-49 OFFICERS)	* C Z			0 0.							0 0							2	66, 68
DEPARTMENT	CIIY (1-9 OFFICERS)	OZ		0	2	1 1						0								84 100
	COUNTY	% • CN	1									12 16								73 98
	STATE	* 02										0								47 100
	ALL DEPARTMENT TYPES	% • ON	133 30	36 8	0 %	3 1	2 0	8 2	5 1	41 9	0 %	13 3	3 1	36 8	41 9	50 4	22 5	7 2	71 16	66 544
			CHIEF	CAPTAIN	COMMISSIONER	COLONEL	ACTING CHIEF	ASSISTANT CHIEF	MAJOR	LIEUTENANT	CORPORAL	DEPUTY SHERIFF	INSPECTOR	SHERIFF	SERGEANT	PATROLMAN	OTHER TITLE	UNDERSHERIFF	SPECIALIST	TOTAL

YEARS OF EXPERIENCE OF PERSON WHO FILLED IN QUESTIONNAIRE

Table i-2

	OMNSHIP	• 0 2	0		6					7	0	27 10
	TOW	Ž										
	≺ ES	æ	~	7	3	24	24	20	13	7	0	101
	FIFTY LARGEST CITIES	° 0	1	'n	ď	11	11	σ	9	ĸ	0	46 101
	MORE RS)	×								80		79 100
	CITY (50 OR MORE OFFICERS)	• 0 <i>N</i>	0	'n	15	13	15	16	6	9	8	79
	<b>4</b> S)	<b>%</b>	Ö	Ф	19	25	22	13	ŧ	1	-	66
IT TYPE	CITY (10-49 OFFICERS)	, 0 N	0	7	17	22	20	12	#	9	-	89
DEPARTMENT	KS)	*	~	10	31	23	14	9	S	#	-	101
DEPA	CITY (1-9 OFFICERS)	NO.	9	.0	56	19	12	S	#	3	-	48
		×	Ŋ	16	30	19	11	80	ŧ	-	ŧ	96
	COUNTY	NO.	3	12	22	14	89	9	'n		IN)	73
	1.1	×	0	0	11	6	38	13	15	11	ŧ	101
	STATE	0	0	0	S	ŧ	18	9	7	S	~	47
	S	<b>%</b>	N	ဆ	22	<b>5</b> 0	20	12	8	9	cu	100
	ALL DEPARTME TYPES	• CN	11	37	96	87	98	55	37	25	σ	445
			2 OR LESS	3-5 YEARS	6-10 YEARS	11-15 YEARS	16-20 YEARS	21-25 YEARS	.26-30 YEARS	31 OR MORE	NO ANSWER	TOTAL

Table 1-1

1. HOW MANY OF THE OFFICERS IN YOUP DEPARTMENT USE. ON DUTY. HANDGRINS OF EACH OF THE FOLLOWING CALIBERS?(EITHER AS THEIR PRIMARY OR THEIP BACKUP WEAPON.)-- Numbers represent numbers of officers carrying handgun of specified caliber.

CALIBER

DEPARTMENT TYPE

TOMUSHIP	*CN		149 56											266 99
FIFTY LARSEST CITIES	NO.		106540 BR											120779 99
CITY (50 OR MORE OFFICERS)	NO.		8409 81											10437 100
CITY (10-49 OFFICEAS)	.NO. #		1293 68											1896 98
C11Y (1-9 OFFICERS)	.05 %		534 70											762 99
COUNTY	NO.		1639 55											5960 99
STATE	.02		25451 59											42791 99
ALL DEPARTMENT TYPES	NO.		144015 80											179891 99
		.32 AUTOMATIC	.38 SPECIAL	MIN O	.357 MAGNUM	.45 AUTOMATIC	.22	•25	.32 REVOLVER	• 380	• 41	<b>3</b>	OTHER	TOTAL

Table 1-2

1. HOW MANY OF THE OFFICERS IN YOUR DEPARTMENT USE. ON DUTY. HANDGUNS OF EACH OF THE FOLLOWING CALIBERS? (EITHER AS THEIR PRIMARY OR THEIR BACKUP WEAPON.).- Numbers represent numbers of departments with at least one officer carrying handgun of specified caliber.

DEPARTMENT TYPE

OWNSHIP	% • ON		23 85											57 211
FIFTY T LARGEST CITIES	. ON		46 100										0 0	93 202
CITY (50 OR WORE OFFICERS)	% • O Z		79 77											164 207
CITY (10-49 OFFICERS)	. O.Z		n6 h8											170 169
CIIY (1-9 OFFICERS)	NO. %		78 93											136 161
COUNTY	, OZ		69 95											136 196
STATE	% • ON		41 87											94 199
ALL DEPARTMENT TYPES	₩ • 02		418 94									10 2		850 190
		.52 AUTOMATIC	.38 SPECIAL	Wix 6	.357 MAGNUM	.45 AUTOMATIC	•22	•25	.32 REVOLVER	•380	•41	<b>55</b>	OTHER	TOTAL

AVERAGE NUMBER OF OFFICERS USING, ON DUTY, HANDGUNS OF SPECIFIED CALIBERS AS PRIMARY OR BACKUP WEAPON.

CALIBER

•			DEPARTMEN	4T TYPE	1		
	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	
	00		. 6	e P		!	
	)     	) • e	) • o	5 • • •	1 (4.63	45°55	
	מי	<b>-</b>	0	'n	đ	120	2
	620.76	23.75	6.85	15.39	109.21	2316.09	• •
	3875	394	90	1 ES	592	32000	21
	255.00	11.71	2.43	3.08	10.06	41.67	1.5
	1700	73	<b>-</b> 0	18	64	101	a n
	493.16	27.73	60.4	9.76	38.57	584.79	3
	2500	353	3.7	30	155	3000	26
	28.00	3.75	6.50	3.82	11.36	337.86	1.0
	<b>2</b> 0	<b></b> 6	20	18	36	2000	
	16.36 1	1.86	2.25	1.89	7.92	31.42	1.33
	<b>©</b> 3	m	* #	9	45	66	· ~

2. SELECT FROM THE LIST IN QUESTION 1 THE HANDGON THAT IS USEN, ON DULY, 3Y MORE OF YOUR OFFICERS THAN ANY OTHER.

MOST USED MANDGUN: 2.A. CALIBER TYPE

CALIBER

	TOWNSHIP	% • CN	18 67		9 33		27 100
	FIFTY LARGEST CITIES	% • ON	41 89	0 0	5 11	0 0	46 100
	CITY (50 OR MORE OFFICERS)	* • 0 Z	63 80	1 1	15 19	0 0	79 100
IT TYPE	CITY (10-49 OFFICERS)	% • ON	63 71	1 1	24 27	1 1	89 100
DEPARTMENT TYPE	CITY (1-9 OFFICERS)	NO. *	91 49	т Т	17 20	7	84 99
	COUNTY	% • ON	54 74	0 0	18 25	1 1	73 190
	STATE	% • ON	25 53	1 2	21 45	0 0	47 100
	ALL DEPARTMENT TYPES	* °O?	328 74		109 24		445 100
			.38	WW 6	. 357 MAGNUM	.45	TOTAL

Table 2-2

2. AVERAGE NUMBER OF OFFICERS USING AS THEIR PRIMARY ON-DUTY WEAPON HANDGUMS OF SPECIFIED CALIBERS.

CALIBER

	ALL DEPARTMENT TYPES	STATE	COUNTY	CILY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
.38 SPECIAL								
	427.02	936.44	26.81	7.66	18,29		2570.76	7.44
>	1	93	1	-	5.		255	-
MAXIMUM	32000	3875	394	+3	4.8		32000	21
	447.00	1700.00	00°	00.0	18.00		00	00.
5	¢	1700	0	J	1.8		0	0
Σ	1700	1700	.0		18		. 0	0
.357 MAGNUM		:					ı	
	170.44	541.33	48.22	5,35	14.33		978.60	3.33
5	-	106	^		2		213	
5	1950	1950	353	10	30		1927	200
TIC								
WEAN	11,00	00.	3.00	11.50	18.00		00.	00.
5	ĸ	C	h	**	GU T		0	
MAXIMUM	50	С	3	2.5	138	0	0	. ~
	00.	00.	00.	00.	00.		00.	00.
MINIMUM	0	0	0	י	0		=	72
MAXIMUM	C	0	0	3	0		_	V

(NUMBER OF GUNS)
RE REVOLVERS? RE AUTOMATICS?
HANDGUNS) A HANDGUNS) A
2.8. HOW MANY(MOST USED HANDGUNS) ARE REVOLVERS? HOW MANY(MOST USED HANDGUNS) ARE AUTOMATICS?
2.8. HOW HOW

	FIFTY TOWNSHIP LARGEST CITIES	% • CN * • ON	3 100 213 100 0 0 0 0	8 100 213 100
			9282 99 111923 100 64 1 0 0	9346 100 111928 100
	CITY (50 OR MORE) OFFICERS)	% · 0/0 · %		
NT TYPE	CITY (10-49 OFFICERS)	* 02	1496 98 36 2	1532 100
DEPARTMENT TYPE	CITY (1-9 OFFICERS)	% • OZ	56 67	613 100
	COUNTY	% • 6N	2327 100 11 0	2338 100
	STATE	₩ • OZ	36918 96 1790 4	38618 100
	ALL DEPARTMENT TYPES	% °ON	162748 99 1840 1	164598 100
GUN TYPE			REVOLVERS AUTOMATICS	TOTAL

Table 2 B-2

2.8. HOW MANY (MOST USED HANDGUNS) ARE REVOLVERS?

(NUMBER OF DEPARTMENTS)

GUN TYPE

MENT STATE COUNTY (117 CITY CITY FIFTY (1187)  MENT (129) (10-49) (50 OR MORE LARSEST (1185)  % NO. %						190	DEPARTMENT TYPE	T TYPE		į	
%         NO.         NO.         NO.         NO.	ALL ARTME IYPES	L <sub>Z</sub>	STATE		COUNTY		17 -9 CERS)	CITY (10-49 OFFICERS)	MORE RS)	FIFTY LARSEST CITIES	TOWNST
98 46 98 73 100 81 96 87 98 78 99 45 100 2 1 2 3 4 3 4 2 2 1 1 0 0 0 100 47 100 76 104 64 100 89 100 79 100 45 100	C2	*	, 0 V	ж	% *CN	ON	*	* 02	æ	* °0N	% · CN
2 1 2 3 4 3 4 2 2 1 1 0 0 100 47 100 75 104 64 100 89 100 79 100 45 100		98	46	96	73 100	20	1 96	87 98	66	46 100	27 100
100 47 100 76 104 84 100 89 100 79 100 46 100		~	-	~	3		3	∾	-	0	5
		0.0	47 1	0.0	76 104	Ô	4 100	89 100	100	46 100	27 100

2.8. CALIBER BREAKDOWN OF ALL MOST USED GUNS - REVOLVERS (NUMBER OF GUNS)

CALIBER				DEPARTMENT TYPE	r TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	% CN	% • ON	% · ON	% • 0?	æ •0₹	% • ON	NO.	* ON
.357 MAGNUM	144093 89 18652 11	25475 69 11443 31	1456 63 868 37	493 84 91 16	1154 77 342 23	6343 90 939 10	107035 95 4893 4	137 64 76 36
.45 TOTAL	-	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 0	0 0	0 0 0	0 0	0 0	
	105/40 100	001 81686	001 /202	001 486	001 96.41	9682 100	001 826111	213 100

2.8. CALIBER BREAKDOWN OF ALL MOST USED GUMS - REVOLVERS (NUMBER OF DEPARTMENTS)

Table 2 B-4

Table 2 B-5

NS - AUTOMATICS (NUMBER OF GUNS) 2 • B

ĠŮ,
USED
MOST
۸۲۲
OF.
BREAKDOWN
CALIBER
B

CALIBER

				DEPARTMENT TYPE	TYPE				
	ALL DEPARTMENT TYPES	STATE	COUNTY	CIIY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OK MORE OFFICERS)	FIFTY LARSEST CITIES	TOWNSHIP	<u>6</u>
	% • ON	* ON	% • ON	% • ON	NO. %	140.	% * ON	*CN	بيز
.38	11 1	0 0	11 100	0 0	0 0	0 0		0	o
₩. 6	1788 97	1700 100	0 0	b 21	18 50	64 100	0	0	0
• 450	41 2	0	0 0	23 79	18 50	0 0	0 0	0	0
TOTAL	1840 100	1700 100	11 100	29 100	36 100	64 100	0 0	0 0	0

2.8. CALIBER BREAKDOWN OF ALL MOST USED GUNS - AUTOMATICS (NUMBER OF DEPARTMENTS)

Table 2 B-6

CALIBER								
		٠		DEPARTMENT TYPE	T TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	* °CZ	. ON	* ON	% •02	% °CN	% • O2	* ON	• CN
•38	3 30	0	3 100	0	0	0	0	0
E 1	01 11	1 100	0	1 33	1 50	1 100	0	0
n di	3 30	0	0	2 67	1 50	0 0	0	0
TOTAL	10 100	1 100	3 100	3 100	2 100	1 100	0	9

000

Table 2 C-1

MANUFACTURER

2.C. LIST BELOW EACH DIFFERENT MODEL OF THIS MOST USED HANDGUN NOW USED IN YOUR (NUMBER OF DEPARTMENTS)
DEPARTMENT.

	TOWNSHIP	* • ON							0 0 ,		39 145
	TOWN	Z									
	IY EST IES	* ON	57	100	0	0	2	0	0 4	0	73 159
	FIFTY LARSEST CITIES	NO.	26	9+	٥	C	1	0	4,0	0	73
	MORE (RS)	ж							0		157
	CITY (50 OR MORE OFFICERS)	₩ • 0N	9 7	75	0	0	<b>-</b> 4	0	0	0	124 157
	9 RS)	<b>%</b>							0		130 145
NT TYPE	CITY (10-49 OFFICERS)	*CN	† †	78		-	ŧ	-	0	-	130
DEPARTMENT	RS)	æ.							0		128
UE P	CIIY (1-9 OFFICERS)	22	33	74	)	0	0	7	0	0	108
	<b>&gt;</b>	æ							7		100 137
	COUNTY	*0N	34	62	1	0	N	C	1	0	100
	tul.	<b>≫</b> -	45	96	0	0	0	0	0	0	141
	STATE	• O N	21	45	0	0	0	0	0	0	99
	FNT	88	50	91	0.	0	N	-	0	0	144
	ALL DEPARTMEN TYPES	• 0N	221	403	~		œ	10	-	-	0 4/9
				N							
			1	2	5	7	13	14	15	OTHER	TOTAL

(NUMBER OF GUNS) 2.D. BARREL LENGTHS:(FOR YOUR WOST USED HANDGUM) HOW MANY HAVE BARRELS OF THE FOLLOWING LENGTHS?

BARREL LENGTH							DEPA	RTMENI	DEPARTMENT TYPE							
	ALL DEPARTMEN TYPES	F 7	STATE	1.1	COUNTY	_	CIIY (1-9 OFFICERS)	RS)	CITY (10-49 OFFICERS)	9 RS)	CITY (50 OR MORE OFFICERS)	MORE RS)	FIFTY LARGEST CITIES	≺ EST	TOWNSHIP	d.
	• CN	*	NO.	×	0N	بع	NC .	æ	% • 0N	<b>%</b>	.0N	<b>≽ę</b>	• 02	Æ	02	æ
LESS THAN 3 INCHES	15067	σ	3242	œ	337	14	50	6	114	7	1563	17	9732	σ	56	12
3-5 INCHES	_	31	24941	65	1887	81		98		85	7239	77	97285	87	175	85
MORE THAN 5 INCHES		0.1	10435	27	114	5		5		7	644	5	4911	<b>3</b>	12	9
NO ANSWER		0	0	0	c	0		0		0	95	-	0	0	0	0
TOTAL	164538 100	0	38618 100	001	2338 100	001	613 100	100	1532	66	9346 100	001	111928 100	100	215 100	001

(NUMBER OF DEPARTMENTS) 2.D. BARKEL LENGINS:(FOR YOUR MOST USED HANDGUN) HOW MANY HAVE BARRELS OF THE FOLLOWING LENGIHS?

BARREL LENGTH

Table 2 D-2

				DEPARTMENT TYPE	I IYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	C11Y (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARSEST CITIES	TOWNSHIP
	** • O Z	* ON	*CN	% • ON	* 0 Z	% • ON	* ON	* CN
LESS THAN 3 INCHES	212 48	16 34	09 1111	21 25	29 33	58 73	32 70	12 44
3-5 INCHES				80 95		76 96	46 100	54 89
MORE THAN 5 INCHES			17 23	12 14		20 25	9 20	3 11
NO ANSWER	1 0			O Э		1 1	0 0	0
TOTAL	712 161	65 138	121 165	115 134	132 149	155 195	87 190	39 144

COMPARISON BETAEEN MOST USED HANDGUN CALIBER AND BARREL LENGTH (NUMBER OF GUNS)

BARREL LENGTH	101	-	0 2	0	5	. 17	,	\$	ن	
	NO. 8		% • 0N	 NO.	<b>₩</b>	NO.	<b>≫</b>	% 10.2 2	æ	
ESS THAN 3 INCHES	15067	6	14651 10	0	0	410	~	0	0	
-5 INCHES	133364	81	114904 80	1789	100	16632	89	0 +	91	
ORE THAN 5 INCHES	16062 10	10	14454 10	0	0	1604	6	ŧ	6	
NO ANSWER	95	С	95	c	0	Э	0	0	0	
6		. •		8.0						
					din	-				
						and the state of t				
						g Nga				

COMPARISON BETWEEN MOST USED HANDGUN CALIBER AND BARREL LENGTH (NUMBER OF DEPARTMENTS)

Table 2A 2D-2

BARREL LENGTH TA	TOTAL	. 84	. 38 80	8	δ Q	ه <u>چ</u>	.357	,	3 th • C S	ت د	
	•	e	2	R	2	R	•	æ	2	£	
LESS THAN 3 INCHES 21.	212 30	20	191 35	35	С	0 0	21 13	13	0	0 0	
	12	89	599	55	<b>±</b>	100	106	68	3	9	
	87 1	بہ	22	10	c	0	30	19	2	0 †7	
	-	O.	-	0	0	0	0	0	0	0	

BARREL LENGTHS WHEN MOST USED HANDGUN IS A .38 CALIBER (NUMBER OF GUNS)

BARREL LENGIH	

							DEPA	RIMENI	DEPARTMENT TYPE								
	ALL DEPAPTMENT TYPES	L <sub>N</sub>	STATE	4.1	COUNTY		CITY (1-9 OFFICERS)	RS)	CITY (10-49 OFFICERS)	9 RS)	CITY (50 OR MORE OFFICERS)	ORE (S)	FIFTY LARGEST CITIES	sı	TOWNSHIP	ПР	
	*00.	≱6	• ON	*	• 0N	₩	% • ON	<b>≫</b>	% %	*	% *ON	36	% • ON	υR	°C N	æ	
LESS THAN 3 INCHES	14651	10	3231	13	596	20	9.	10	111	10	1534 18	18	9408	6	23	17	
S-5 INCHES	114904	80		64		73		85	916	85	6320	9/	93412	87	104	9/	
MORE I HAN S INCHES	14454	10		38		7		ഹ	49	9	394	r.		ŧ	10	7	
NO ANSWER	95	0		0	C	0		0	0	0	95	-		0	0	0	
TOTAL	144104 100	00	25475 100	00	1467 100	100	493 100	100	1154 101	101	8343 100	0.0	107035 100	001	137	137 100	

(NUMBER OF DEPARTMENTS) BARREL LENGTHS WHEN MOST USED HANDGUN IS A .39 CALIBER

BARREL LENGTH

Table 2 D-4

	TOWNSHIP	* 02	10 56 15 83 2 11 0 0	27 150
	FIFTY LARGEST CITIES	NO.*	29 71 41 100 7 17 0 0	77 188
	CITY (50 OR MORE OFFICERS)	% • O.Y.	53 84 60 95 13 21 1 2	127 202
T TYPE	CITY (10-49 OFFICERS)	× • • • • • • • • • • • • • • • • • • •	28 44 60 95 9 14 0 0	97 153
DEPARTMENT TYPE	CITY (1-9 OFFICERS)	NO.	10 25 62 97 10 16 0 8	88 138
	COUNTY	NO.	40 74 41 75 8 15 0 0	89 165
	STATE	* ON	15 60 20 80 6 24 0 0	41 164
	ALL DEPARTMENT TYPES	% *07	191 58 299 91 55 17 1 0	546 166
			LESS THAN 3 INCHES 3-5 INCHES MORE THAN 5 INCHES NO ANSWER	TOTAL

Table 2 D-5

BARREL LENGTHS WHEN MOST USED HANDGUN IS A .357 CALIBER (NUMBER OF GUNS)

BARREL LENGTH						0EP7	NATMEN	DEPARTMENT TYPE							
	ALL DEPARTMENT TYPES	STATE		COUNTY		CITY (1-9 OFFICERS)	(RS)	CITY (10-49 OFFICERS)	Y 49 EkS)	CITY (50 OR MORE OFFICERS)	MORE 35)	FIFTY LARSEST CITIES	× ES	TOWNSHIP	dI
	* CZ	0	×R	°02	<b>≫</b>	• ON	% • ON	° ON	NO.	• 01:	₩	• CN	.*	CN	Ж
LESS THAN 3 INCHES		11	0		ຸ ທ	ٔ ک	Ŋ,	3	-		ю	324	7		<b>⇒</b>
3-5 INCHES	16632 89	10642 93	33.	A10	93	85	93	296	296 87	855	91	3873	79	71	93
MUKE, I HAN 5 INCHES		067			V	₹	-	ĵ,	<u>c</u>		٥	060	<del>,</del>		ר
TOTAL	18652 100	11443 100	00	869 100	001	91	66	345	342 101	939	100	4893 100	100	76	76 100
											,	4			

BARREL LENGTHS WHEN MOST USED HANDGUN IS A .357 CALIBER (NUMBER OF DEPARTMENTS)

Table 2 D-6

BARREL LENGTH

					OEPAR	DEPARTMENT TYPE	TYPE								
ALL DEPARTYENT TYPES	ST	STATE	COUNTY	<u>}</u>	C11Y (1-9 OFFICERS)	(\$)	CITY (10-49 OFFICERS)	(S)	CITY (50 OR MORE OFFICERS)	MORE RS)	FIFTY LARSEST CITIES	≺ ES	TOWNSHIP	a II	
* ON	9	. ov	° ON	<b>%</b>	NO. 8	æ	% . on	æ	* 02	*	% • ON	**	° CZ	<b>≫</b> ¢	
		1 5	· <b>J</b>	25	<u>့</u> ဂ	29	٠,	t	5	33	3	อ9	2	2 2 2	
106 97	20	96 0	18	100	10	116	23	96	15 100	100	ľ	100	9	100	
	J	2 10		††† 8 ·	-	9	6	37	7	47	N	0+	1	11	
157 144	8	23 110	30	30 166	22 129	129	33 137	137	27 180	180	10	10 200	12	12 153	

(NUMBER OF DEPARTMENTS) 2.5. AMMUNITION: LIST EACH TYPE OF AMMUNITION THAT YOUR OFFICERS USE WITH THIS MOST USED HANDGUN.

BULLET TYPE				DEPARTMENT TYPE	TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	% • ON	* • ON	% CN	NO.	% • O?	*07	**	* C Z
LEAD								
JACKETED								
HOLLOWPOINT	105 24	8 17	14 19	11 13	25 28	. 29 37	15 33	3 11
WAD CUTTER								
SEMI WADCUTTER								
SOFT POINT								
METAL PIERCING						2		
UNUSABLE INFO								
UNKNOWN								
NO ANSWER	5 1				1 1			
TOTAL	562 126	59 125	88,119	94 111	112 125	110 140	68 148	31 114

(NUMBER OF DEPARTMENTS) LIST EACH BULLET WEIGHT! IN GRAINS! THAT YOUR OFFICERS USE WITH THIS MOST USED HANDGUN.

Table 2 E-2

BULLET WEIGHT (IN GRAINS)							DEPA	DEPARTMENT	TYPE							
	ALL DEPARTMENT TYPES	<b>⊢</b>	STATE	1.1	COUNTY		CIIY (1-9 OFFICERS)	(5)	CITY (10-49 OFFICERS)	9 RS.)	CITY (50 OR YORE OFFICERS)	WORE (RS)	FIFTY LARGEST CITIES	ES	TOWNSHIP	d I
	• ON	<b>3</b> 9.	• CN	æ	° 0	ъR	0N	æ	° ON	ж	02	*	, 0 N	R	° O N	*
LESS THAN 91	-	0	9	0		0	-4	-	0	0	3	0	0	0	0	0
91-100	٣î	-	-	~		0		-	٦	-	0	0	0	0	0	0
101-110	75	17	7	15	œ	11	30	10	18	50	22	28	10	22	~	7
111-120	~≀	0	0	0		-4		-	0	0	0	0	Û	0	0	c
121-130	33	7	m	9		8		-	Q	7	8	10	c	20	0	0
131-140		-	0	0		'n		0	0	0	7	-	-	~	0	0
141-150	55	12	<b>a</b> 0	17		10		12	13	15	80	10	2	ū	æ	61
151-160		73	37	29		17		69	61	69	59	75	39	R5	21	7.8
161-170		-	0	0		0		-	0	0	0	0	С	0	~	7
171-180		0	-	N		0		0	0	c	1	-	С	Э	٥	c
181-190	ŧ.O	-	0	0		0		-	N	~	0	0	0	c	0	0
191-200		9	-4	~		S		20	*7	ı۳	7	6	ю	7	0	0
GREATER THAN 210	9	-	0	0				~	-	-	C	· c	~	ŧ	0	0
NO ANSWER/DONT KNOW		<b>.</b>	-	N		11		ر ا	<i>\$</i>	ŧ	~	۳	C	0	0	0
TOTAL	558 1	24	59	125	89	121	46	112	109 122	122	108	137	€9	149	30	111
						B-14										

MANUFACTURER

(NUMBER OF DEPARTMENTS)
USED
-
IIS MOS
Ŧ
H M
S 11S
OFFICER
YOUR
LIST EACH MANUFACTURER OF AMMUNITION THAI YOUR OFFICERS USE WITH THIS MANDGUN.
9F
MANUFACTURER
EACH SUN.
LIST

							DEPA	DEPARTMENT	TYPE								
	ALL DEPARTMENT TYPES		STATE		COUNTY		CITY (1-9 OFFICERS)	KS)	CITY (10-49 OFFICERS)	r 49 ERS)	CITY (50 OR MORE OFFICERS)	MORE RS)	FIFTY LARGEST CITIES	Y ES	TOWNSHIP	dІ	
	• OZ	.,	• 0 0	*	°CN	*8	Š 2	<b>≫</b>	, ON	≫	• ON	3 <b>/</b> 2	0N	æ	°CN	≱≼	
2		_		11		٤,	٠,	ŧ	2		2	۳	⇉	6	-	ŧ	
5				0		-	4	-	3		ъ	ŧ	7	N	-1	ŧ	
89	237 53			52		t 3	45	54	0 77		43	54	23	61	17	63	
10				9		14	7	œ	7		11	14	7	15	~	7	
11		•		~		-	1	-	3		0	0	ŧ	6	0	0	
12				15		14	2	11	17		23	59	œ	17	N	7	
13				ŧ		ы	<b>၁</b>	0	1		t	Ŋ	-	~	0	0	
16		_		0 t		29	25	30	33		28	35	17	37	6	33	
18				۲		S	1	-	~		ŧ	2	-	~	-	ŧ	
19				9		ю	>	0	3		۵	33	0	0	0	0	
ANY. ALL	3			0		-1	Э	0	1		-	-	0	0	0	c	
MULTIPLE MANUFACTURERS	9		1	~	0	0	0	0	2	~	1	-	~	ŧ	0	C	
UNKNOWN	5			0		ŧ	5	0	1		0	0	0	0	7	ŧ	
OTHER	6 1			0		0	7	-	0		-	-	t	6	0	0	
NO ANSWER	6	•		0		3	າ	ŧ	3		0	0	-	~	0	0	
TOTAL	614 136	•	71 1	150	94 ]	129	90	115	118	130	123	155	78	169	34	126	

3. GO BACK TO QUESTION 1 AND PICK OUT THE MANDGUN THAT IS SECOND MOST OFTEN USED BY YOUR OFFICERS.

SECOND MOST USED HANDGUN: 3.A. CALIBER TYPE

CALIBER

				DEPARTMEN.	I TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	* OZ:	% • 07	NO.	NO.	× 0N.	* 07.7	% ° 0N	* CN
. 32								
.38								
WW 6								
.357 MAGNUM	132 51	10 33	25 57	23 53	2 <sub>0</sub> 50	25 51	14 64	Ch 6
54.								
.22								
•25								
.380	1 0							
77.	1 0							
TOTAL	259 101	30 98	44 101	43 99	52 100	49 100	22 101	19 99

3. AVERAGE NUMBER OF OFFICERS ASSOCIATED WITH SECOND MOST USED ON DUTY HANDGUNS. FOR SPECIFIED CALIBERS

CALIBER				DEPARTMEN	T TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
• 32 AUTOMATIC FEAN MINIMUM MAXIMUM	5.14			00.00	00000		13.00 6 20	2 ° 00
•38 SPECIAL MEAN MINIMUM MAXIMUM	45.31 1 400	127.50 24 296	13.36 1 98	3.14 1	6.90 1 20	27.36 5 51	227.80 128 400	2.75 1 6
9 MM MEAN MINIMUM MAXIMUM	4.76 1 30		\$ 2.5 \$ 5.5 \$ 6.0	- 2 2 2 2 2 5	3.00		00.0	2 • 0 0 1 5
• 357 MAGNUM MENNIMUM MAXIMUM MAXIMUM	86.21 1 3000		13.04 1	3.52 1 37	5.81 1 20		444.14 30 3000	2.11 1 5
#49 ADIOMATIC	9•40 2 35		3.00	00.0	t t t		0000	0000
OTHER MENIMUM MAXIMUM	16.36 1 4.8		0 0	3.50	4.00 2 6		15.00 15 15	1.00

3.8. HOW MANY (SECOND MOST USED HANDGUNS) ARE REVOLVERS? HOW MANY (SECOND MOST USED HANDGUNS) ARE AUTOMATICS? Table 3 B-1

(NUMBER OF GUNS)

	TOWNSHIP	* 02	33 77 10 23	43 100
	FIFTY LARGEST CITIES	* 02	7383 100 15 0	7393 100
	CITY (50 OR MORE OFFICERS)	% · 07.	1101 94 67 6	1168 100
T TYPE	CITY (10-49 OFFICERS)	% °CN	280 93 21 7	307 100
DEPARTMENT TYPE	C11Y (1-9 OFFICERS)	NO.	150 92 12 8	142 100
	COUNTY	.0 %	517 99 6 1	523 100
	STATE	* °07	5960 98 127 2	6087 100
	ALL DEPARTMENT TYPES	% °OZ	15410 98 258 2	15668 100
GUN TYPE			REVOLVERS AUTOMATICS	TOTAL

(NUMBER OF DEPARTMENTS) 3.8. HOW MANY (SECOND MOST USED HANDGUNS) ARE REVOLVERS? HOW MANY (SECOND MOST USED HANDGUNS) ARE AUTOMATICS?

Table 3 B-2

GUN TYPE

				DEPARTMENT TYPE	T TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARSEST CITIES	TOWNSHIP
	* ON	NO. %	% • CN	* 22	NO.	* 07	. ON	* • ON
REVOLVERS AUTOWATICS	229 88 31 12	26 87 4 13	42 95 3 7	36 88 5 12	46 88 6 12	42 86 7 14	21 95 1 5	14 74 5 26
TOTAL	250 100	30 100	45 102	43 100	52 100	49 100	22 100	19 100

(NUMBER OF GUNS) 3.8. CALIBER BREAKDOWN OF ALL SECOND MOST USED GUNS - REVOLVERS

00 - 2 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	_	STATE	COUNTY		DEPARTMENT TYPE	IT TYPE CITY		FIETY	40W2HIP	٩
\$\text{NO.} \text{\chi}\$ \text{NO.} \text{\chi}\$ \t	NEPARTMENT TYPES			0	(1-9 F1cERS)	(10-49 OFFICERS)	(50 OR MORE OFFICERS)	LARGEST		
26 2040 34 187 36 45 35 136 48 383 35 1139 15 74 3920 66 326 63 44 5 5 150 52 667 61 6218 84 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	æ	% · ON	** **		% · OZ	* 07		.e	• CN	~
26 2040 34 187 36 45 35 136 48 383 35 1139 15 74 3920 66 326 63 61 62 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0			_		0 0	9	25 0		_
74 3920 66 326 63 84 62 150 52 667 61 6218 84 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	56					136 48	383	1139 15		39
	74					150 52	199	6218 84		58
	0					0 0	0	0		C
	0			_		0	0	0		r
	0			_		0	45	0 0		_
	, o				000			00 1012	1. 3.7.500	- 6

(NUMBER OF DEPARTMENTS) 3.8. CALIBER BREAKDOWN OF ALL SECOND MOST USED GUNS - REVOLVERS Table 3 B-4

CALIBER

	J		.32	8	57 MAGNUM	 Q.	3	rotal.
	ALL DEPARTWENT TYPES	% CN	6 3	87 38	132 58	2 1	1 0	229 100
	STATE	* ON			10 38			26 100
	COUNTY	* CN			25 60			42 100
OCPARTMENT	C1IY (1-9 OFFICERS)	% • ○N			23 61			36 101
T TYPE	CIIY (10-49 OFFICERS)	NO. 8			25 57			40 100
	CITY (50 OR MORE OFFICERS)	* 02			25 60		1 2	42 100
	FIFTY LARGEST CITIES	* CN			14 67		0 0	21 101
	TOWNSHIP	* ON			9 64			14 100

(NUMBER OF GUNS) 3.8. CALIBER BREAKDOWN OF ALL SECOND MOST USED GUNS - AUTOMATICS

. CAL16ER				JEPARTMENT TYPE	TYPE			
	ALL DEPAPTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49) OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	* CZ	40°	% *	\$ .	% * ON	* 02	* ON	% • ON
.32 9 MM •45 •25 •25 •380	2 1 61 31 45 17 69 27 21 8 40 16	30 24 0 24 0 39 40 31	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 7 7 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 9 43 4 19 6 29 2 10 0 0	0 0 23 34 37 55 0 0 7 10	15 100	2 20 8 80 0 0 0 0
TOTAL	258 100	127 100	6 100	12 100	21 101	66 29	15 100	10 106
Table 3 B-6			•			4		
3.8. CALIBER BREAKDOWN OF ALL SECOND MOST USED GUNS	. SECOND MOST (		- AUTOMATICS	(NUMBER OF DEPARTMENTS)	EPARIMENTS)			
CALIBER				DEPARTMENT TYPE	I TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	CITY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	*ON	% ************************************	S. CA	NO.	* °0N	NO.	NO.	* ON
. 3.2 . 4.5 . 2.2 . 2.5 . 3.80	1 3 17 55 5 16 3 10 4 13	0 50 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00000 00000000000000000000000000000000	0 0 3 50 1 17 1 17 1 17 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 1 1 0 0 0	1 \$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TOTAL	31 100	4 100	3 100	5 100	6 101	7 100	1 100	5 100

MANUFACTURER

(NUMBER OF DEPARTMENTS) 3.C. LIST BELOW EACH DIFFERENT MODEL OF THIS SECOND MOST USED HANDGUN NOW USED IN YOUR DEPARTMENT.

(NUMBER OF GUNS) 3.D. BARREL LENGINS: FOR YOUR SECOND MOST USED MANDGUN, HOW WANY HAVE BARRELS OF THE FOLLOWING LENGINS?

	ALL STATE DEPARTMENT TYPES	% °CN % °CN	15 1150	10258 65 2421 40	3009 19 2516	0 0 60	15658 99 6097 100
	COUNTY	% • ON		326 62			523 100
DEPARTMENT TYPE	CITY (1-9 OFFICERS)	. O.Z.	17 12	118 83	±	5	142 100
T TYPE	CITY (10-49 OFFICERS)	110. %		197 64		10 3	307 99
	CITY (5U OR MORE OFFICERS)	* 0 2				16 1	1168 100
	FIFTY LARSEST CITTES	* CN				0 0	7399 100
	dIHSi,MO1	* • OZ		25 5A			43 100

(NUMBER OF DEPARTMENTS) 3.D. BARREL LENGTHS: FOR YOUR SECOND MOST USED HANDGUN, HOW MANY HAVE BARRELS OF THE FOLLOWING LENGTHS? Table 3 D-2

BARREL LENGTH

17.32 117 TOWNSHIP 25 9 2 0 0 45 85 41 0 34 172 FIFTY LARSEST CITIES 0160 . 02 CITY (50 OR MORE OFFICERS) 33 88 24 24 72 147 . 02 123 CITY (10-49 OFFICERS) 23 23 23 23 121 99 °0 12 DEPARTMENT TYPE CITY (1-9 OFFICERS) 19 77 7 5 46 108 , 0, 55 W S 36 77 25 0 61 138 COUNTY Š 36 120 60 7 0 STATE 90 16 16 16 0 ALL DEPARTMENT TYPES 33 77 20 20 341 132 36 200 51 ° LESS THAN 3 INCHES 3-5 INCHES MORE THAN 5 INCHES NO ANSWER TOTAL

Table 3 D-3 BARREL LENGTHS WHEN SECOND MOST USED HANDGHM IS A .38 CALIREP

BARREL LENGTH

(NUMBER OF GUNS)

				DEPARTMENT TYPE	T TYPE			
	ALL DEPARTMENT TYPES	STATE	COUNTY	C1TY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARSEST CITTES	TOWNSHIP
	% • 014	**	NO. %	* ON	NO. %	* OZ	· ON	* • • • • • • • • • • • • • • • • • • •
LESS THAN 3 INCHES		104.6 51	120 64			191 50	654 57	12 92
MORE THAN'S INCHES	277 2	0		30	17 12	36 9	23 2	
NO ANSWER 2		o c	0.0	o o ;		0	0	
TOTAL	3943 100	2040 100	187 100	45 100	136 99	383 100	1139 100	13 100
	***************************************	ę		Ł				

(NUMBER OF DEPARTMENTS) Table 3 D-4 BARREL LENGTHS WHEN SECOND MOST USED HANDGUN IS A .38 CALIBER

BARREL LENGTH

	ALL	STATE	COUNTY	DEPARTMENT TYPE C11Y CIT	IT TYPE CITY	CITY	FIFTY	TOWNSHIP
	DEPARTMENT TYPES			(1-9 OFFICERS)	(10-49 OFFICERS)	(50 OR MORE OFFICERS)	CITIES	
	NO. %	* · C7	NO. %	% • ON	% °02	× 00.	* CN	* 0 Z
LESS THAN 3 INCHES	55 63		10 71			10 71	5 100	€0
3-5 INCHES	19 95	8 50	11 79	11 79	11 55	11 79	3 60	
MORE THAN 5 INCHES	13 15		1 7			4 29	2 40	
NO ANSWER	1 1		0 0			0 0	ە 0	
TOTAL	125 143	19 119	22 157	17 122	28 140	25 179	10 200	

BARREL LENGTH

BARREL LENGTHS WHEN SECOND MOST USED HANDGUN IS A .357 CALIBER

							JEPA	Z J Z	DEPARTMENT IYER								
	ALL NEPARTMENT TYPES	FNT	STATE	ш	COUNTY		C1TY (1-9 OFFICEAS)	(5)	CITY (10-49 OFFICERS)	65 KS	CITY (50 OR MORE OFFICERS)	MORE 35)	FIFTY LARSEST CITIES	Y ES	TOWISHIP	d I	
	• 0 <u>Z</u>	ж	• CN	ж	• 0 N	ж	% • ON	<b>;</b> €	*ON	ж	• 07:	æ	°0	<b>-</b> €	NO.	*	
LESS THAN 3 INCHES		<v< td=""><td>47</td><td>-</td><td></td><td>. 11</td><td>-</td><td>-</td><td>0</td><td>0</td><td></td><td>ď</td><td></td><td>-</td><td>1</td><td></td><td></td></v<>	47	-		. 11	-	-	0	0		ď		-	1		
3-5 INCHES		73	1357	35		78	73	96	130	61		06		16	10		
MORE THAN 5 INCHES	5929	56	2516	49	37	11	+	S	14	6		ĸ		S	N		
NO ANSWER		c	0	0		0	າ	<b>3</b> *	0	0	16	~	0	0	0	C	
TOTAL	11381 1	101	3920 100	100	326 100	00	81 100	100	150 100	100	667 100	100	6218 100	100	61	19 100	

(NUMBER OF DEPARTMENTS) BARREL LENGTHS WHEN SECOND MOST USED HANDGUN IS A .357 CALIBER Table 3 D-6

BARREL LENGTH

						DEPA	*TMEN	DEPARTMENT TYPE								
	ALL DEPARTMENT TYPES	STATÉ		COUNTY	<b>&gt;</b>	CITY (1-9 OFFICERS)	(5)	CITY (10-49 OFFICERS)		CITY (50 OR MORE OFFICERS)	ORE S.)	FIFTY LARGEST CITIES	⊀ ES	TOWNSHIP	d I	
	* CZ	% •CN	×	NO. 3	æ	% • ON	æ	% *0?	<b>₩</b>	** *** ***	æ	NO.	**	*CN	% •CN	
LESS THAN 3 INCHES	20 15	S	50	9	24	1	ŧ	0 0	0	<b>\$</b>	16	۳,	21	1	1 11	
3-5 INCHES		9	09	20	80	17	74	2º 1º	0	54	96	7	100	6	100	
MORE THAN 5 INCHES		N	20	œ	32	*7	13	6 2	5	80	32	7	20	N	22	
NO ANSEER		0	o	c	0	~	6	0	0	-	ŧ	0 0	3	0	0	
TOTAL	175 132	13 130	30	34 136	136	25 100	001	32 123	10	37 148	œ	24 171	171	12	12 133	

(NUMBER OF DEPARTMENTS) 3.E. AWMUNITION: LIST EACH TYPE OF AMMUNITION THAT YOUR OFFICEPS USE WITH THIS SECOND MOST USED HANDGUN

ALL DEPARTMENT TYPES NO. % NO. % 112 43 39 15 69 27 69 27 69 27 10 1 1 0 1 0 1 0 2 14 1 0 36 14	STATE  NO. %  14 47 5 17 2 7 2 7 2 7 6 20 6 20 6 13 1 3 3 1 1 3 1 1 3	NO. NO. * * * * * * * * * * * * * * * * * * *	OEPARTMENT (11-9 OFFICERS) NO. % NO. % 12 28 12 28 0 0 0 0 0 0 1 12 28 1 2 2 1 16 1 1 1 2	CITY (10-49) OFFICERS) NO. * 18 35 12 23 12 23 19 37 2 4 2 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	CITY 050 OR WORE 06FICERS) NO. * 10 20 11 2 11 2 11 2 12 31 1 2 1 2 0 0 0 0 0 0 0 0 0 0	FIFTY CITIES NO. % NO. % 16 73 2 9 2 9 6 27 1 5 0 0 0 0 0 0 0 0 0 0	TOW4SHIP NO. *  NO. *  B #2  2 11  2 11  1 5  1 0  0 0  0 0  0 0  0 0  0 0
309 118	38 127	51 117	401 64	66 129	62 126	28 128	19 101
36 14							
1 0							
1 0							
28 11							
9							
8							
69 27							
39 15							
112 43							
% CZ		* • ON	NO.*			 O.V.	
ALL DEPARTMENT TYPES	STATE	COUNTY	CIIY (1-9 OFFICERS)	CITY (10-49 OFFICERS)	CITY (50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
			DEPARTMEN				

(NUMBER OF DEPARTMENTS) LIST EACH BULLET WEIGHT. IN GRAINS, THAT YOUR OFFICERS USE WITH THIS SECOND MOST USED HANDGUN

BULLET WEIGHT (IN GRAINS)

Table 3 E-2

DEPARTMENT TYPE

	ALL DEPARTWENT TYPES	F Z	STATE	·	COUNTY		CITY (1-9 OFFICERS)	%2)	CITY (10-49 OFFICERS)	9 RS)	CITY (50 OR MORE OFFICERS)	MORE (RS)	FIFTY LARGEST CITIES	× S ⊟ S ⊣	TOWNSHIP	۵
	0N	<b>≽</b> €	• CN	ж	0N	%	.0N	æ	NO.	<b>≫</b>	*0N	æ	0 V	æ	• CN	*
LESS THAN 91	œ	5	1	۳		0		ß	'n		~		0	9		С
91-100	7	2	-	'n		0		0	1		N		2	6		S
101-110	43	17	9	20		Ç,		6	13		10		Þ	18		11
111-120	ŧ	~	<b>-</b>	'n		~		0	-		1		0	0		0
121-130	<b>ب</b>	6	2	7		11		2	ŧ		S		#	18		11
131-140	٤	_	1	ю		2		0	O		0		1	s		0
141-150		10	2	17		11		N	ю		#		C	0		11
151-160	148	57	20	29		57		99	27		27		15	89		53
171-180		С	0	0		0		0			0		С	0		c
181-190	N	1	0	0		0		0	1		0		C	0		2
191-200	12	S	С	0		2		12	7		~		С	С		0
GREATER THAN 210	S	~	0	0	-	2	٦	2	O.	0	0	<b>+</b>	-	ın.	၁	С
NO ANSWER/DONT KNOW	19	7	~	7		11		12	<b>~</b> 0		3		~	0		5
TOTAL	300 1	117	39	130	49	110	€ 4	100	54	124	59	119	27	123	19 1	101

B-25

THAT YOUR OFFICERS USE WITH THIS SECOND

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AMMUNITION TH	
9	
LIST EACH MANUFACTURER OF A MOST USED HANDGUN	
LIST EACH	
LIST	

MANUFACTURER

							DEPARTMEN	*TMENT	TYPE							
	ALL PEPARTMENT TYPES	<b>-</b>	STATE	41	COURTY		CITY (1-9 OFFICERS)	(5)	CITY (10-49 OFFICERS)	; (S)	CITY (50 OR MORE OFFICERS)	MORE RS )	FIFTY LARGEST CITTES	Y ES	TOWNSHIP	٩
	• CN	¥	*0N	ж	. ON	æ	2	ж	°02	æ	*0N	%	.00	æ	°CZ	ЖF
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2	7	0	0	0		N		0		0		0	0	0	0	0
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16		31	13	۲÷		18		28		33		35	6	41	ŧ	21
18	œ	E)	໙	7		7		0		0		9	0	0	0	c
19	9	c۷	2	7		~		ય		0		0	0	9	0	0
ANY DEL	ત્ય	-	0	0		~		2		0		0	0	С	0	0
MULTIPLE MANUFACTURERS	<i>\$</i>	N	0	0		0		0		#		0	~	5	0	0
CNKNOWN	S	~	1	'n		0		0		#		N	0	0	1	S
OTHER	'n	_	0	0		0		0		2		ય	-	S	0	c
NO ANSWER	9	o	0	0		~		8		ત્ય	~	đ	-	J.	0	c
TOTAL	330 18	.27	77	146	53 120	0.	40	106	66 1	129	68	138	34	157	19	100

		TOWNSHIP	* • CN			9 0 2 0 2 0			18 101
		FIFTY LARSEST CITIES	₩ • ON			14 34			41 100
RTMENTS)		CITY (50 OR WORE OFFICERS)	NO.			) 1 1 1 1 1 1			63 100
(NUMBER OF DEPARTMENTS)	TYPE	CITY (10-49 OFFICERS)	×0.4			26 th			63 100
CALIBER.	DEPARTMENT	CITY (1.79) OFFICERS)	NO.			2 / C			. 64 100
ED HANDGUN BY		COUNTY	NO. %			25 th			54 100
COLLO MOST USE	<b>v</b> .	STATE	% · 0v			10 40			25 100
TABLE ZA, 3A COMPARISON BETWEEN MOST USED HANDGUN AND SECOND MOST USED HANDGUN BY CALIBER.		ALL DEPAPTMENT TYPES	* ON			132 40		11 3	328 100
BETWEEN MOST US		SECOND	USED IS:	32 AUTO.	₩ ₩ ₩ ₩	357 AAG.	45 AUTO.	OTHER	
Table 27, 32 COMPARISON	CALIBER	WHEN	USED IN:	38					TOTAL

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100	100	83 0 12	66	0 0	100
. 0	1	20 0 3	24	0	1
0 1 100	100		100	50	
		<b>1</b> 2000	17	<b>ਕਜ</b>	
0 0		20 22 20 20	100	1 100	100
00		13 0 4 1	18		
0 0	100		100	00	
0		16 0 0 0	21	00	0
25	4 100	77 17 3	101	2 50	100
<b>⇔</b> ₩	ŧ	84 18 3	109	~ ~ ~	#
Ä		38 9 MM NONE 45 AUTO.		ZE	
38 NONE		9 5 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		38 NONE	

TCTAL 357 446.

9 MM

45 AUTO.

TOTAL

TOTAL

4. HOW ABOUT OFF DUTY: ABOUT HOW MANY OF THE OFFICERS IN YOUR DEPARTMENT USE HANDGUNS OF EACH OF THE FOLOWING CALIPERS WHEN THEY ARE OFF DUTY?

CALIBER

DEPARTMENT IYPE

(NUMBER OF OFFICERS)

100 TOWNSHIP 179 21 10 127 FIFTY LARGEST CITIES 73456 3763 1351 614 361 ŝ CITY (50 OR MORE OFFICERS) 66 68 167 176 5615 232 232 8689 148 ŝ OFF ICERS) 1254 101 CITY (10-49 9 300 OFFICERS) C117 (1-9 373 15 297 ŝ COUNTY 2741 2017 16890 100 12492 1854 1956 35 è ALL DEPARTMENT 9000000 110534 101 TYPES 6188 6 34, 165 ° C N 4435 1682 24646 .22 LK .25 AUTOMATIC .35 AUTOMATIC .36 SPECIAL 9 MM LUGER .357 MAGNUM .45 AUTOMATIC .380 . 45 REVOLVER TOTAL OTHER 41

(NUMBER OF DEPARTMENTS) 4. HO. ABOUT OFF DUTY: ABOUT HOW MANY OF THE OFFICERS IN YOUR DEPARTMENT USE HANDGUNS OF EACH OF THE FOLOWING CALIBERS WHEN THEY ARE OFF DUTY?

DEPARTMENT TYPE

82199

66

CALIBER

Table 4-2

dIHSNMO!	* °CN		10 37												6 22	55 203
FIFTY T LARGEST CITIES	 ON														10 22	143 310
CITY (50 OR MORE OFFICERS)	% • O?:														14 18	221 281
CITY (10-49 OFFICERS)	NO.		15 17												13 15	205 230
CITY (1-9 OFFICERS)	* 02		b 10													127 152
COUNTY	MO. %		10 14													142 194
STATE	% · CN		6 7													76 161
ALL DEPARTMENT TYPES	% ON		81 18									3 1	3 1	c 1	100 22	969 218
		.22 LR	.25 AUTOMATIC	.32 AUTOMATIC	•38 SPECIAL	9 MM LUGER	.357 MAGNUM	.45 AUTOMATIC	. 32 REVOLVER	.380	.41	27.	.45 REVOLVER	OTHER	NONE/20 ANSWER	TOTAL

B-28

Table 2A/4-1 COMPARISON BETWEEN MOST USED HANDGUN AND OFF-PUTY HANDGUNS. RY CALIBEK.

CALIBER

(NUMBER OF OFFICERS)

d.	94	82 1.	34.	- t	<b>ε</b> ας,	100	00000	С	100 100 100 100 100	101	000000	С
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FIFTY LARGES CITIE	0N	5851 6384	89 <b>2</b> 59	25410	3602	180675	00000	C	2611 2611 2611 4232 4232 4232 4232 1621	24761 1	0636656	6
MORE RS)	ж	10			0 00	101	20 20 20 20 20	100	3 7 7 7 118 118 7	100	0000000	0
CITY (50 OR OFFICE	02	956 1693	5940	1755	1264	16260	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	320	90 201 201 208 460 560 460 200	3029	000000	0
(S)	ж	000	) ti =	10	- m	101	0001	001	5 8 28 15 11 11	001	17 10 17 17 17	102
CITY (10-4°	0N	183	887	198 198	69	2031	18 1 0 0	18 1	65 94 161 332 179 93 133	1187	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	108
3,	<b>¥</b> €	ดจำ	15 56 5	) TO =	10	00	00000	00.	134 t t 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	00	0 110 779 0 0	66
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ALL DEPARTME TYPES	°CZ	9934	109375	31120	7821	228794 1	54 1788 64 64 64	5044	3993 4054 3529 12295 6992 9683 7554 2332	50432 1	18 18 18 19	137
		0.0		10.0			42.0		0.0 (0.0		00.00	
THO THE	DUTY IS:	22 LK 25 AUTO	2 2 3 3 5 5 5 6 7 8 7 8 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8	357 MAG	OTHER		38 9 MM 357 MAG 45 AUTO 0.THER		22 LR 25 AUTG 32 AUTG 38 9 WM 557 MAG 45 AUTG		22 LM 25 AUTO 32 AUTO 38 357 MAG 45 AUTO 01HER	
WHEN	DUTY IS:	38				TOTAL	W	TOTAL	357 MAG	TOTAL	45 AUTO	TOTAL
	ALL STATE COUNTY CITY CITY CITY (1-9 (10-49 (50 OR MORE 17PES OFFICERS) OFFICERS)	ALL STATE COUNTY CLTY CITY CITY FIFTY TOWNSHIP TYPES OFFICERS) OFFICERS) OFFICERS) CITIES OFFICERS)	OFF  DUTY IS:  NO. % NO.	OFF   OFF   COUNTY   CLTY   CLTY   CLTY   FIFTY   TOWNSHI	ALL STATE COUNTY CLITY CITY FIFTY TOWNSHI TYPES  OFFILERS) OFFILERS) OFFICERS) CLITES  OFFILERS) OFFICERS) OFFICERS) CLITES  OFFILERS) OFFICERS) CLITES  OFFILERS) OFFICERS) CLITES  OFFILERS) OFFICERS) CLITES  OFFILERS) OFFICERS) CLITES  TOWNSHI  13	OFF   OFF	OFFI   CITY   CITY	OFFICE   COUNTY   CITY   CIT	OFFICE   O	Marie   Mari	OTHER   TEPAPORE   T	No.   No.

Table 24/4-2 COMPARISON BEINEEN MOST USED HANDGUN AND OFF-DUTY HANDGUNS, BY CALIBER.

(NUMBER OF DEPARTMENTS)

	<u> </u>	ж	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	101	00000	0	12 12 13 13 13 13 13	96	3060000	c
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	FIFTY LARGES CITIE	0	1100 1100 1100 1100 1100 1100 1100 110	117	00000	c)	<i>ಣಕ್ಕಕ್ಕ</i>	56	c 0 0 0 0 0 0 0	Э
	MORE ERS)	<b>&gt;</b> e	11 11 11 11 7 8	102	00000	100	2 6 6 7 7 12 12 6	66	0000000	Э
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	r 19 185)	<b>≫</b>	77 10 10 10 10 10	66	100 0 0 0	100	1311 1311 144 110 100 100 110 110 110 110 110 1	66	71 0 21 71 71 71 0	102
TYPE	CITY (10-49 OFFICERS)	NO.	51 11 12 13 13 13	124	3 <b>40</b> 00	1	111 123 10 10 77 77	74	поннана	g
DEPARTMENT	KS)	æ	ლი დ ფათ - ლ გ გი - ლ გი ფი ლ	66	00000	0.0	0 t 0 t 0 t 0 0 0	.02	000000000000000000000000000000000000000	00
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	<b>&gt;</b>	ж	7 t d 11	102	00000	0	80 80 80 H H H B B	66	000000000000000000000000000000000000000	100
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	w	æ	5 24 11 5 5 39	100	0000	100	22	100	0000000	0
	STATE	, 0 V	N E E E E E E E E E E E E E E E E E E E	38	0-000	1	10 10 10 10 10 10 10	37	0000000	0
	ENT	¥	9 9 9 9 12 12	101	12 50 12 12	98	33 9 7 4 10 10 10 10 10 10 10 10 10 10 10 10 10	66	0000 0000 0000	66
	ALL DEPARTMENT TYPES	C Z	40 60 51 245 66 61 61 44 78	678	нэннн	æ	200 200 200 200 200 200 200 200 200 200	272	N M	11
			BLANK				BLANK		CANK	
		DUTY IS:	22 LR 25 AUTO 32 AUTO 38 357 MAG 45 AUTO 0THER NONE OR B		38 9 MM 557 MAG 45 AUTO 0THER		22 LK 25 AUTO 32 AUTO 36 MM 95 MM 957 MAG 45 AUTO 0THER NONE OR B		22 LA 25 AUTO 32 AUTO 38 357 MAG 45 AUTO 0THER NONE OR BLANK	
CALIBER	WHEN	DUTY IS:	38	TOTAL	<u>≽</u>	TOTAL	357 MAG	TOTAL	45 AUTO	TOTAL

(NUMBERS OF DEPARTMENTS) 5. WHEN YOU THINK OF ALL THE HANDGUNS THAT HAVE BEEN USED BY YOUR OFFICERS IN THE LAST 5 YEARS; WHICH OF THESE GUNS HAVE HAD! OR HAVE CAUSED PROJLEMS?

ALL DEPARTMENT TYPES NO. *	<b>⊢</b> ¥	STATE	COUNTY NO. 8	*	UEPARTME (11) (1-9 OFFICERS) NO. %	DEPARTMENT TYPE CL1Y (1-9 (10-9 NO. % NO.	CITY (10-49) OFFICERS)	.a. ≫	CITY (SO OR WORE OFFICERS) NO. %	40RE 4S) %	FIFTY LARGEST CITIES NO.	S ∓S ×	TOWNSHIP ON	چ <u>د</u>
4		72		59		54	45	47		53	33	33 72	11	t 1
37		17		45		58		62		32	6	20	13	e:
79 18		5 11	19	56	15	18		42	12	15	t	σ́	ъ	11
445 101		47 100	73 10	100	84	100	39 100	001	79	79 100	40	40 101	27 100	100

(NUMBER OF DEPARTMENTS)

DEPARTMENT TYPE

5. WHEN YOU THINK OF ALL THE HANDGUNS THAT HAVE BEEN USED RY YOUR OFFICERS IN THE LAST 5 YEAKS: WHICH OF THESE GUNS HAVE HAD: OR HAVE CAUSED PROJLEMS?

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EJECTOR RUD PROBS. ABUSE BY PERSONNEL ACCIDENTAL DISCHARGE ACCUACY POOR AGE: WEAR & TEAR PROBS. CAUSED BY AWMO. CYLINDER PROBS.	ALL TYPES TYPES NO. 10 20 20 4 4 22 16 11		5TATE NO. 1 1 1 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1		<b>-</b>		OFFICERS)  NO. 0  0  0  1  1  1  1  1  1  1  1  1  1  1	\$ \$ 0000 35 50000 35 5000000000000000000000	CITY (10-49) NO. % NO. % 1 2 2 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	% % % % % % % % % % % % % % % % % % %	CITY (\$0 OR OFFICE NO. 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MORE RS) 88 10 12 17 17 17 17 18	FIFTY LARSEST CITIES NO. 5 1 10 3 0 0 0 0 0 0	FS 15 30 30 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	NO. NO. O. O	41 × 00 00 00 00 00 00 00 00 00 00 00 00 0
DEFECTIVE WEG! RELIABILITY DOUBLE/SINGLE ACTION PROB. EXTRACTOR ROD PROBS. FEEDING PROBS. FINISH (BLUING) PROBS. FINISH (BLUING) PROBS. FINISH (BLUING) PROBS. GRIP PROBS. HEAD SPACE PRUBS. HAMMERYFIRING PIN PROBS. LEAD SHAVING MISFIRES SIGHT PROBS. SIOHPING POWER INSUFFICIENT TRIGGER PROBS. TIMING OFF SEAR PROBS. TIMING OFF SEAR PROBS.	115 100 100 115 117 100 100 100 100 100 100 100 100 100	7 9 9 11 11 11 14 15 15 16 16 17 18 18 18 18 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19	777757184718879907	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	11100012801008000111	2 2 3 3 3 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1000170041870010770781	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	130103202833700110021	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 0 0 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12 26 26 27 28 28 14 11 12 12 12 13 14 15 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	41000018800018865918	12 27 27 27 28 33 33 33 33 34 37 37 37 37 37 37 37 37 37 37		27 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

6. HOW ABOUT HANDGUN AWMUNITION: HAVE YOUR OFFICERS FOUND ANY PROBLEMS WITH ANY HANDGUN AMMUNITION THAT THEY HAVE USED IN THE LAST 5 YEARS?

RESPONSE

DEPARTMENT TYPE

(NUMBER OF DEPARTMENTS)

Table 6-2

(NUMBER OF DEPARTMENTS) 6. HOW ABOUT HANDGUN AMMUNITION: HAVE YOUR OFFICERS FOUND ANY PROBLEMS WITH ANY HANDGUN AMMUNITION THAT THEY HAVE USED IN THE LAST 5 YEARS?

PROBLEM

DEPARTMENT TYPE

							i i		) -							
	ALL DEPARTMENT TYPES	S E	STATE		COUNTY		CIIY (1-9 OFFICERS	KS)	CITY (10-49 OFFICERS)	49 FRS)	CITY (50 OR MORE OFFICERS)	MORE RS)	FIFTY LARGEST CITIES	× ES T	TOWNSHIP	<u>G</u>
-	ON	%	• CN	×	02	*	0N	<b>&gt;</b> e	, CN	Ж	• ON	<b>Ж</b>	, 0	*	• 0N	£
POWDER MISC PROBS.	4.0	ю.	0	0	٦.	80	0	0	0	0	~	9	П	4	0	0
ACCURACY POOR	25	212	<b>∾</b> ທ	10 24	0 0	c ī	J -	0 71	C r	0 5	<b></b> • α	34	ю v	11	00	0 0
GUN FAILURE	17	15	) <b></b> 4	ر س		15	10	0	· *1	212	a	15	9	21	0	0
LEADING, FOULING	9 6	ഗ		Ŋ	m	23	0	0	С	0	0	0	2	7	0	0
MISFIRES	8 8	97	ა	54		46	2	59	3	21	6	56	S	18	0	0
PRIMER PROBS.	67	\$7		19		94	0	0	~	7	11	32	7	22	0	С
POWER PENETRATION LOW	35	20		59		0	5	71		7	5	15	18	64	0	0
POWDER, WRONG AMI	77	∞ .		14		23	1	14	ŧ	59	5	15	S	18	0	0
RELOAD PROBLEMS	<b>∞</b> (	~ 1		10		15	1	14	2	14	1	۳	0	0	0	Ü
RICOCHET	<b>∞</b> ι	~ 1		2		0	7	14	7	7	0	0	4	14	0	0
SMOKING EXCESSIVE	v.	n ۱ رم		ς.		<b>6</b> 0	0	0		7	0	0	0	0	0	C
VARIABILITY OF ENERGY RATES	4 .	ر د د		0		23	0	0	1	7	0	0	0	0	0	0
PENETRATION TOO GREAT	1;	019		1 t		0	J	0	~	14	3	6	2	7	0	0
OTHER	14	77		5¢		හ	0	0	-	7	3	6	3	11	0	Ü
KNOCKDOWN POWER LOW	52	17		54		0	າ	43	٣	21	9	18	14	20	0	0
MULTIPLE PROBS.	'n			0		0	0	0	0	0		٣	4	_	0	Ü
TOTAL	263	217	カカ	212	30.2	230	14	199	20	183	60	178	7.1	253	0	0

COMPARISON BETWEEN CALIBER OF AMMUNITION AND PROBLEMS OF AMMUNITION CITED

PROBLEMS																				
	ΤA		.39		.357		ω Σ		345		.22	Δ1	. 25	_			ANY	ALL		ANSWER
	• <u>Q</u>	<u>ح</u> پو	<u>.</u>	ж	• 02	ž *	• 02	æ	္	æ	0	æ	.00	æ	.00	*6	°02	ж	0 2	*
POWDER, MISC PROBS.	3			~		0		c		U		c		_	c	_	_	-	_	0
ACCURACY POOR	9			0		, ,		: 0										> 0		0 0
				U		2		=		>		>		>	<b>-</b>	20	-	ייכ	0	>
CASE CARIRIDGE PROBS.	T +77			α		6		25		33		001		0	-	20	N	18	0	0
GUN FAILURE	/1			7		9		25		17		0		0	0	0	c	0	0	0
LEADING, FOULING	9			r		0		0		0		0		0	0	0	О	c	_	0
MISFIRES	30 1					8		· C		0		0		0	· C	0	· P.	27	-	001
PRIMER PROBS.	27 1			01		6		c		0		0	-	00	0	د د	ه (	18	· C	0
POWER, PENETRATION LOW	37 1			81		0		0		0		c		0	О	0	0		c	0
POWDER, WRONG AMT	20			8		6		0		17		0		0	0	0	۸.	18	_	0
RELOAD PROBLEMS	<b>∞</b>	~	ŧ	N	ĸ	6	c	0	0	0	0	0	0	0	0	0	۱	5	· c	0
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COMPARISON OF AMMUNITION PROBLEMS AND AMMUNITION MANUFACTURERS CITED

(NUMBER OF DEPARTMENTS)

PROBLEMS																				
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COMPARISON OF AMMUNITION-PROBLEMS AND AMMUNITION WANUFACTURERS CITED (CONF.)

Table 6-5

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