A VIEW OF MANAGEMENT IN FIRE INVESTIGATION UNITS

VOLUME II

ISSUES AND TRENDS FOR THE '90s

**FEDERAL EMERGENCY MANAGEMENT AGENCY.
UNITED STATES FIRE ADMINISTRATION**

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FIRE INVESTIGATION UNITS

VOLUME II

Issues & Trends
for the 90's

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ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY

Fifteen fire investigation agencies from Maryland to Washington participated in a U.S. Fire Administration project that provided management assistance on fire and arson investigation. Earlier research funded by the U.S. Fire Administration indicated that many local and state agencies responsible for arson control wanted hands-on assistance in defining a better system for investigating and prosecuting incendiary fires. Many sites responded to the U.S. Fire Administration's invitation for applications and ultimately the following fifteen were chosen:

> Asheville, North Carolina
> Aurora, Colorado
> Baltimore County, Maryland
> Columbia, South Carolina
> Gainesville, Florida
> Garland, Texas
> Humboldt County, California
> Imperial County, California
> Kitsap County, Washington
> Mohave County, Arizona
> Nevada State Arson Unit
> Norfolk, Virginia
> Pleasantville, New Jersey
> Tennessee State Arson Unit
> Washington, D.C.

TriData Corporation of Arlington, as the contractor for the project, conducted management "audits" for each of the sites and prepared individualized reports documenting strengths and problem areas as well as what measures were recommended to improve overall investigation procedures and capabilities, and to enhance coordination among investigation agencies.

Noteworthy among the positive features found in the majority of sites were the following strengths:

- ***Good Leadership*** - Senior officers, department heads and elected officials exhibited a strong commitment to improving arson control methods.

- ***Qualified Investigators*** - The vast majority of investigators in the fifteen sites were conducting good investigations and documenting cases well. Investigators' training and credentials were good.

- ***Intra- and Inter-Departmental Cooperation --*** Many of the sites enjoyed good cooperation among the agencies having a role in the investigation and prosecution of intentionally set fires. However, where such cooperation was not evident, fire investigation suffered noticeably.

- ***Facilities and Equipment*** - Investigation tools, office spaces, and computers were generally adequate among the majority of sites.

The most common problems that were discovered with fire investigation management and operations were:

- Inadequate fire investigation data and data management.

- Lack of central management or clear coordination among investigation agencies.

- Insufficient case review and quality control.

- Problems with workload balance -- too many cases per investigator for the most part; too few cases in one case.

- Inadequate level of cooperation and involvement from prosecuting attorney.

- Insufficient juvenile education and intervention programs.

- Legal and policy problems pertaining to weapons and power of arrest.

- Gaps in adequate first-due company reporting to the investigator.

- Poorly documented standard procedures.

Evaluations from the sites as to the value and impact of this technical assistance clearly indicated that the assistance was highly successful in identifying solutions, and that most of the sites quickly began implementing the recommendations. Changes in policy and procedures were reported as early as one or two weeks following site visits.

FOREWORD

Current Fire and Arson Investigation Projects
of the United States Fire Administration

"Arson is one of America's largest, deadliest and most expensive fire problems. In the NFIRS (National Fire Incident Reporting System) metropolitan departments, it is THE deadliest and most expensive fire problem they face," so states the recent United States Fire Administration report, *Arson in America, A Profile of 1989 NFIRS.*

The United States Fire Administration (USFA) has been responding to the ongoing problem of arson that persists in not just our big cities, but in smaller towns and rural areas as well. For many years, USFA has conducted research programs and provided technical assistance on the subject of arson. USFA also works closely with other Federal agencies and with such organizations as the International Association of Arson Investigators, the National Fire Protection Association and the National Association of State Fire Marshals to address trends in arson and improve methods for investigating and prosecuting this crime. A sample of current projects includes:

- *Update of Arson Information Management System (A.I.M.S.)* -- This is a computer software system designed to collect arson investigation case data and produce special reports. A new, improved version of A.I.M.S. software is now available. The program is more user-friendly and has been designed with input from over 50 field investigators. Copies are available free from USFA.

- *Forum of Arson Investigators* -- Periodically USFA convenes a forum on arson and invites investigators from around the country to share their views and concerns on arson.

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- *Community-based anti-arson programs* -- Every year USFA offers small grants to non-profit community groups engaged in arson prevention and control.

- *Arson Resource Center* - This data and information center offers USFA publications and copies of journal articles (past and present) on arson, and includes on-line access to materials by way of an electronic bulletin board.

- *Publications* - Recent publications include the "Curious Rids" public education campaign lot, a *Field Index Directory,* a *Fire Investigations Training and Publications Inventory* and a *Fire Investigations Tools, Equipment and Techniques Guide,* which are all available free from USFA.

- *Vehicle Fire Investigation* -- In this project USFA is creating a user's guide and videotape on the "how to's" of investigating vehicle fires.

- *Juvenile Firesetter Counseling* - USFA's current program on this subject is being conducted jointly with the U.S. Department of Justice and is a multi-year effort to identify the best elements of existing programs, create a model, test the model and implement and evaluate the program in selected sites. Also available from USFA is the three volume series of juvenile firesetter counseling manuals that have been very popular for several years.

- *Fire Investigation Management Assistance* -- Local and state arson units receive in-depth management reviews and technical assistance through this project. (The subject of this report.)

Further information on the projects listed above can be obtained by contacting:

Mr. Tom Minnich
Project Officer
United States Fire Administration
16825 S. Seton Avenue, Room 311
Emmitsburg, Maryland 21727

LOCATION OF PROJECT SITES

Kitsap County, WA

Humboldt County, CA

Nevada
State
Arson Unit

Aurora, CO

Pleasantville, NJ

Baltimore County, MD

Washington D.C.

Norfolk, VA

Asheville, NC

Columbia, SC

Imperial County, CA

Mohave County, AZ

Garland, TX

Gainesville, FL

Tennessee State Arson Unit

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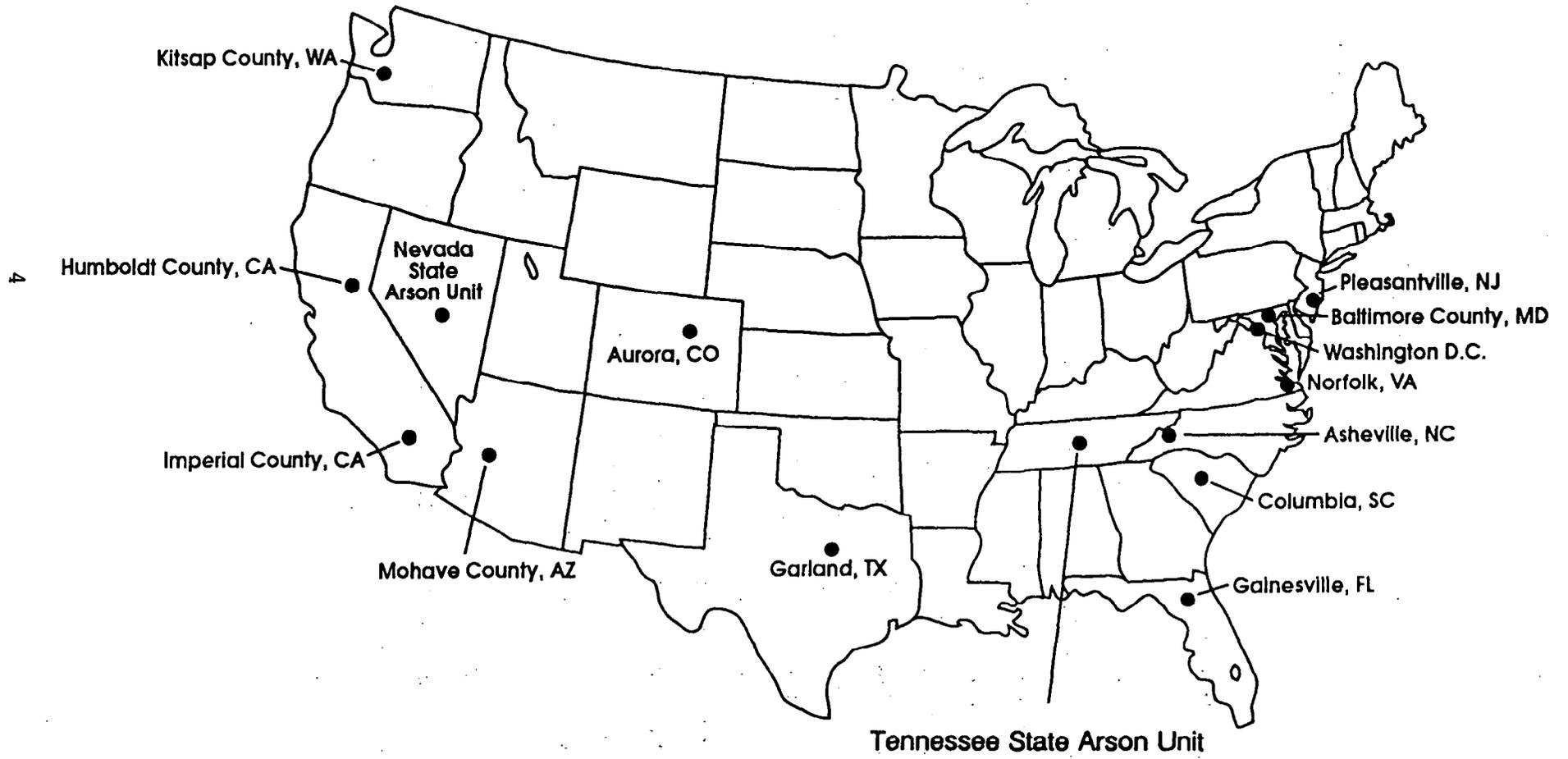
CHAPTER ONE

BACKGROUND OF THE PROJECT

Project History

Various local and state agencies have been receiving assistance from the United States Fire Administration in examining their efforts to control arson and in identifying how they can improve their operation and programs. During the period 1989-1991, USFA provided direct technical assistance to fifteen fire investigation agencies across the country as part of the Arson Unit Management Assistance to the Field Project. Working together, USFA and their contractor, TriData Corporation in Arlington, Virginia, first conferred with dozens of fire and police investigators, fire marshals, senior police and fire officers, and prosecutors to document the state of fire investigation management, and to ascertain the problems being encountered. As part of that project four fire investigation agencies were visited in Orlando, Florida; Wilmington, North Carolina; Rochester, New York; and Livingston County, Michigan where the operations and management systems of these fire investigation units were analyzed. The units were profiled in USFA's report, *A view of Management in Fire Investigation Units: Issues and Trends for the 90's.*

Three communities then were selected from a group of applications to receive direct technical assistance. The three sites, identified as "Phase I Sites", were followed by seven more in Phase II and five more in Phase III as follows:

PHASE I SITES

Gainesville, Florida
Kitsap County, Washington
Norfolk, Virginia

PHASE II SITES

Asheville, North Carolina
Aurora, Colorado
Baltimore County, Maryland
Imperial County, California
Mohave County, Arizona
Pleasantville, New Jersey
Tennessee State Arson Unit

PHASE III SITES

Columbia, South Carolina
Garland, Texas
Humboldt County, California
Nevada State Arson Unit
Washington, D.C.

Site Selection Process

With literally thousands of city and county fire investigation agencies and units throughout the United States, the challenge of selecting fifteen in a 2-3 month time span was one of quickly identifying a good cross-section of worthy sites that reflected a range of population size, arson problems, and available resources. To aid in locating potential sites, TriData contacted State Fire Marshals from numerous states and various State Directors of the National Volunteer Fire Council. Press releases announcing the availability of USFA's no-cost management technical assistance were sent to fire service publications to reach a wider audience. Interested fire investigation units were asked to contact TriData for information on how to apply.

Each potential site was mailed a short, two-page application, "Information Background Sheet for Candidate Sites," a copy of which is shown at the end of this chapter. The applications and accompanying letters or data were carefully reviewed for the following:

- Type and extent of arson problem
- Geographic location
- Size of community/state served by unit
- Reasons given for wanting the technical assistance
- Willingness of key officials to accept an objective management "audit," to consider changes, and to cooperate with project personnel.
- Potential for the project's having an impact on the local/state arson situation.

A short list of most-suitable sites was prepared and USFA made the final selections. Successful applicants were sent a list of data, documents, reports and procedures that were needed by the consultant to begin assessing organizational and management details of each site. This information combined with information from conversations between TriData and the primary contact was used to formulate an individualized Technical Assistance Plan for each site (see copy of form at the end of this chapter).

Methodology for Technical Assistance

Once the sites were selected, USFA-authorized investigators and management consultants working under contract with TriData analyzed hundreds of pages of standard operating procedures, data, reports, case filings and other material. They conducted over one hundred on-site interviews with prosecutors, fire marshals, fire and police investigators, sheriffs, elected and appointed officials, and others. Project personnel visited dozens of facilities and toured arson-prone neighborhoods as part of their work. Fifteen separate, comprehensive fire investigation management assessment reports were produced, outlining local investigation management strengths and problem areas, and recommending actions that could be taken to ameliorate areas of concern.

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This report summarizes the findings and lessons learned from these fifteen sites for the benefit of other local and state arson control agencies that are interested in knowing how a selected sample of public safety organizations have been faring in attacking arson during these recent years of serious budget cutbacks.

Chapter Two presents profiles of the fifteen sites to assist the reader in identifying which ones most closely resemble his or her own in terms of population, size of fire problem, investigation workload, characteristics of arson problem and so forth. The profiles also will demonstrate how widely aspects of the arson problem and approaches to solving it vary from site to site.

Chapter Three presents the most common positive features of arson unit management. that were discovered, followed by a discussion in Chapter Four of the most prevalent problems.

Finally, Chapter Five describes how the sites that received USFA's technical assistance used and benefitted from the management "audits." All sites which participated in the field work and received their final report by November 1991 completed a Project Impact Assessment. Their evaluations of the project are summarized in the last chapter.

INFORMATION BACKGROUND SHEET
FOR CANDIDATE SITES

USFA FIRE INVESTIGATION MANAGEMENT PROJECT

Information Background Sheet for Candidate Sites

Please provide the following information:

1. Name of organization: _____
   Address: _____
   _____
   _____
   _____

2. Type of organization:

   _ Fire Department   _ Police/Sheriff   _ Other
   _ Volunteer   _ City   _____
   _ Paid   _ County   Please identify
   _ Combination

3. Contact Person and Title: _____
   Daytime Phone: _____

4. Population of area served: _____
   (Check One) _ Urban   _ Suburban   _ Rural

5. Which departments or agencies are involved in investigating suspicious fires in your jurisdiction?

6. Do you have an organized fire investigation team? _ Yes   _ No
   If yes, who makes up the team?

   _____
   Name and Title of Unit Commander (or Chief Investigator)

7. Please provide the following data:

	1988	1989	1990 (YTD)
Total number of fires			
Total number of fire investigations			
Total number of fires determined to be incendiary			
Number of incendiary cases submitted to the prosecutor			

8. What arson-related problems are confronting your community and what has been the impact?

9. Please discuss briefly any organizational and management problems that are affecting your ability to deal with arson fires and prosecute arsonists?

10. What would you like to accomplish if the USFA could provide fire investigation management assistance? How could our project help you?

11. Would you be willing to participate in a 2-3 day USFA site visit; to implement reasonable recommendations; and to cooperate with project personnel? _ Yes   _ No

TECHNICAL ASSISTANCE PLAN

TECHNICAL ASSISTANCE PLAN

Arson Unit Management

community: _____

Contact Name and Phone: _____

1. <u>Characteristics of Community's Arson Problem</u> (describe primary motives; types of perpetrators; impact on community vis-a-vis deaths, injuries, dollar loss, disinvestment, etc.).

2. <u>Existing Organizational and Management Problems</u> (please check the areas where there appear to be problems based on your review of the community's data and on conversations with the site coordinator).

    _ Timeliness of investigations   _ Inter-agency coordination (police, fire and D.A.)

    _ Quality of investigations   _ Post investigation follow-up
    _ Data   _ Performance evaluation
    _ Reports   _ Communications
    _ Training   _ Personnel management
    _ Funding   _ Workload problems
    _ Morale   _ Other _____
    _ Prevention and control   _ Other _____
      programs

3. <u>Goals for Technical Assistance</u> (identify <u>what</u> you plan to accomplish to improve the management and organization of fire investigation work in the community and to improve the prosecution rate of arson fires.

4. <u>Proposed Methods for Providing Technical Assistance</u> (identify <u>how</u> you will accomplish the TA goals for this community).

5. Is a full management audit recommended? Yes _   No _

6. Personnel Assigned:

7. Dates of Scheduled Site Visit:

CHAPTER TWO

OVERVIEW OF PARTICIPATING SITES

communities.   In the following paragraphs and figures we provide an overview of the sites.

figure 1. Comparison of Population		
Population Category	*Number of Sites*	*Percentage*
10,000 - 50,000	2	13.3
50,000 - 100,000	2	13.3
100,000 - 250,000	5	33.3
250,000 - 500,000	3	20.0
500,000 and above	3	20.0
Total	15	99.9 (100%)

figure 2. Comparison of Jurisdiction Type		
Jurisdiction Type	*Number of Sites*	*Percentage*
Rural County	4	26.6
Small City	1	6.7
Medium Size City	4	26.6
Large City	3	20.0
Urban/Metro County		6.7
State	2	13.3
Total	15	99.9 (100%)

figure 3. Comparison of Geographic Location		
Location	*Number of Sites*	*Percentage*
Northwest	1	6.7
Southwest	4	26.6
West Coast	2	13.3
south	6'	40.0
Mid-Atlantic	1	6.7
Northeast	1	6.7
Total	15	100.0%

Figure 4. Comparison of Full-time versus Part-Time Investigators		
	Number of Sites	*Percentage*
Full-Time Investigator(s)	12	80.0
Part-Time or Volunteer Investigators	3	20.0
Total	15	100.0%

As the preceding comparisons show, the bulk of the sites (over 25 percent) served a population of over 100,000 residents dispersed throughout predominately medium-size cities and rural counties and unincorporated rural portions of states. A majority of the sites were located in the southern and southwestern regions of the country; sites in these regions also produced the most applications for technical assistance. Eighty percent of the sites function with at least one full-time investigator; three of the sites have only a part-time person assigned to investigations or operate with on-call volunteers or paid investigators that respond as part of a county-wide or regional team.

The figures on the following two pages offer a fuller profile of the sites. The first shows each site by population, number of full-time investigators, composition of the fire investigation unit and the number of investigations carried out in 1990. The second compares the outcomes of incendiary cases among the sites.

FIGURE 5. PROJECT SITES: BASIC PROFILE				
Site	Population	Number of Full-Time Investigators	Composition of Unit	Number of Investigations (1990)
1. Gainesville, FL	84,800	2	Fire Department Investigator	140
2. Kitsap County, WA	189,700	1	County Fire Marshal's lead investigtor with cause and origin assistance in Fire Districts	104
3. Norfolk, VA	261,230	6	Fire investigators cross-trained, headquarted in Fire Department.	263
4. Baltimore County, MD	687,000	10	Five 2-person Fire/Detective teams	499
5. Asheville, NC	64,000	1	Fire Department Investigator; Additional investigator position in process; County Task Force in process	128
6. Aurora, CO	230,000	4.5	Fire Department Investigators	320
7. Pleasantville, NJ	20,000	1.5	Fire Department Investigators. Participate in County Task Force	62
8. Mohave County, AZ	102,000	0	On-call volunteers and some paid personnel from over one dozen Fire, Police, and Sheriff's agencies	60
9. State of Tennessee	5,000,000	19	State investigators divided among three regional offices	978

FIGURE 5. PROJECT SITES: BASIC PROFILE				
Site	*Population*	*Number of Full-time Investigators*	*Composition of Unit*	*Number of Investigations (1990)*
10. Imperial County, CA	31,550 (unincorporated area)	0	1 part-time chief investigator + 6 designated cause and origin investigators from shifts. Sheriff's Office and State FMO assist	10
11. Columbia, SC	298,000	2	Fire Department investigator aided by police on occasion	62
12. Garland, TX	185,000	2	Fire Department investigators; second position just added. Team of trained firefighters do initial c/o.	157
13. Humboldt County, CA	118,000	0	County Team, comprised of First Sheriff investigator and D.A.'s office.	108
14. State of Nevada	750,000 (14 rural counties)	5	State fire investigators operate from single state capitol office location. Assisted by local volunteers in areas of jurisdiction.	58
15. Washington, D.C.	626,000	16	Eight fire investigators, 1 Fire Lieutenant and 6 Police Detectives and 1 Police Sergeant. C/O by company officers.	866 (Estimated)

Site	Number of Investigations (1990)	Number of Cases Determined Incendiary	Percent of Investigated Fires Ruled as Arson	Number of Cases Token by Prosecutors	Number of Convictims
FIGURE 6. PROJECT SITES: OUTCOMES OF INCENDIARY CASES					
1. Gainesville, FL	140	39	28%	6	6
2. Kitsap County, WA	104	39	38	4	2
3. Norfolk, VA	263	177	67	40	38
4. Baltimore County, MD	499	321	64	34	2
5. Asheville, NC	128	38	30	3	3
6. Aurora, CO	320	233	73	233	61
7. Pleasantville, NJ	62	14	23	0	0
8. Mohave County, AZ	60*	20*	33	4*	NA
9. State of Tennessee	978	649	66	123	108
10. Imperial County, CA	10*	4*	40	3*	1*
11. Columbia, SC	62	33	53	2	0
12. Garland, TX	157	116	74	116	NA
13. Humboldt County, CA	108	75	69	5	NA
14. State of Nevada	58	26	45	14	13
15. Washington, D.C.	866*	174	20	13	NA

NA = Not Available
 * = Estimated

CHAPTER THREE

POSITIVE FEATURES AND COMMON STRENGTHS

Common Operational and Management Strengths

One of the goals of this project was to identify and document what was noteworthy about the operations and management of the fire investigation units studied, and to share any exceptional procedures or programs among the sites. While no two sites were the same, there were a number of positive features that were found fairly consistently. Most of the sites shared these strengths:

- *Good Leadership* - Perhaps it is not surprising that so many of the sites exhibited strong leadership among the senior officers and department heads and a commitment to improving arson control methods; each locale had sought out the project's management assistance and competed to be selected. Fire Chiefs, State Fire Marshals' Offices and Fire Investigation Commanders content with the status quo would not have elected to participate. Nevertheless, it was satisfying to find that the vast majority of officials participating were leaders committed to discovering or confirming what was not working and to fixing their problem areas. With these clear signals from the top that fire investigation and arson prosecution were important, the likelihood of investigation improvements and greater success against arsonists was enhanced.

- *Qualified Investigators* - For the most part the individuals assigned to the task of investigating fires had received good training and were involved in on-going training sessions (usually local, in-house). Their investigation reports demonstrated knowledge of investigation procedures, techniques, and case documentation. Where there were exceptions to this rule, the problem

stemmed from inadequate funding or low priority given to fire investigator training by public safety managers or elected officials, not from lack of interest on the part of the investigators.

■. ***Intra- and Inter-Departmental Cooperation*** -- Many sites in this project could count on a reliable support system both from within the fire agency and from "outside" organizations (defined as other than the primary investigation agency). Police and Sheriffs detectives in these several sites could be counted on to cooperate in follow-up investigation work; the prosecuting attorneys provided at least some support; fire inspectors and public fire educators from the Fire Marshal's Office helped when called upon for their expertise; and suppression forces generally showed cooperation with fire investigators and in some cases volunteered to be trained in preliminary origin and cause work.

It should be noted that where such cooperation was lacking, there was a serious negative impact on the quality and quantity of investigations, and investigators typically were hamstrung in their efforts to investigate and pursue arson cases.

■ ***Facilities and Equipment -*** Though none of the sites had the luxury of a full range of the latest equipment in plentiful supply and extensive office space with state-of-the-art communications, most were well enough equipped to do a credible job of investigating fires and documenting their findings. A surprising number of sites either had, or obtained shortly after the project, computer capabilities to assist with the management of fire investigation data. They also had someone on staff with computer skills who could, once an adequate amount of data was generated (see the next chapter for more discussion of this); set up an information management system.

Many of the sites equipped each investigator with basic investigation tools rather than consolidating all equipment into an arson van or truck.

A snapshot of the particular strengths found at each site is presented below. This may help readers identify places to contact for ideas, In the final section of this report, we highlight a few exceptional programs and features we discovered that other communities may wish to replicate.

Snapshot of Selected Strengths from Each Site

Each of the fifteen sites displayed a number of positive features. They included:

1. *Gainesville, Florida*
   - Strong management with notable academic, management and teaching background
   - Good computer equipment and expertise available
   - Good cooperation from police
   - Excellent standards for investigator qualifications

2. *Kitsap County, Washington*
   - Good leadership and support among three District Fire Chiefs
   - Progressive and cooperative County Prosecutor
   - Mutual aid between County Fire Marshal's Office investigators and Fire District investigators

3. *Norfolk, Virginia*

- Good management information on investigations and utilization of monthly reports
- Excellent in-house training capability from Unit Commander
- Work performance goals used in annual evaluations
- Excellent documentation of witness statements responsible for many successful prosecutions

4. **Baltimore County, Maryland**

- An especially well-trained supervisor
- Investigators with excellent credentials
- Good equipment and facilities
- Fire suppression training in origin and cause improving accuracy of cause determination
- New fire and police investigation teams
- Good standard operating procedures and reports

5. *Asheville, North Carolina*

- New multi-agency county arson task force
- Progressive Fire Chief and cooperative Sheriff and District Attorney
- Lead investigator with excellent credentials
- Quality investigations

6. *Aurora, Colorado*

- Good leadership
- Good training programs, both before and while one is certified as an investigator
- Use accelerant-certified canine as supplement to mechanical equipment
- Instituted case prioritization system to triage large number of cases

- Excellent computer capabilities and good support staff

7. *Pleasantville, New Jersey*

- Good facilities and equipment
- Investigators with excellent credentials
- Excellent case documentation and reports
- Unusually good prosecutor support (County) which has its own arson unit
- Juvenile counseling program initiated by Pleasantville using County Mental Health Department

8. *Mohave County, Arizona*

- Enthusiastic and cooperative volunteers in Task Force
- Good qualifications among investigation specialties represented
- Good standard operating procedures and report formats
- Good support from State, police, and juvenile intervention program

9. *Tennessee State Arson Unit*

- Very good commitment to job among investigators despite lack of equipment, large response area and relatively low pay.
- Good standard operating procedures

10. *Imperial County, California*

- Good leadership for change
- New training program which teaches origin and cause to one suppression member from each shift
- Good cooperation from Sheriff's Office and State Fire Marshal's Office.

11. *Columbia, South Carolina*

Good leadership for change

- Police and fire safety teams conduct public safety presentations to citizens (includes arson prevention)
- Good cooperation between police and fire

12. *Garland, Texas*

- Good leadership and commitment
- New group of origin and cause investigators formed from suppression personnel
- Unusually comprehensive and clear standard operating procedures
- Good effort treating juvenile firesetters; additional program improvements underway
- Good cooperation among fire, police and District Attorney
- Computer equipment and personnel available for automated information management system
- Good personnel evaluation procedures used by management

13. *Humboldt County, California*

- Good commitment from largely volunteer-based task force
- Police and Fire Chiefs from Arcata and Eureka providing special support and leadership for task force
- Supportive District Attorney, e.g., assigned staff to be task force coordinator

14. *Nevada State Arson Unit*

- Good leadership; managers have excellent credentials
- Well-trained investigators
- Good dedication to job among investigators despite large service areas, many adjunct responsibilities, and relatively low pay
- Good state-run origin and cause training program for local fire personnel, most of whom are volunteers

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15. *Washington, D.C.*
- Excellent manpower and resources available
- Well-trained police and fire investigation supervisors with good credentials
- Good computer capabilities available

Notable Programs and Procedures

A few of the local programs and procedures uncovered deserve special mention because they are particularly good examples that might be valuable to other communities. In fact, as we came upon these we passed them along to other project sites, as appropriate, to begin the process of information sharing.

1. *Gainesville's Standards for Investigators*

It is not uncommon for fire investigation agencies to recruit personnel with fire suppression and/or inspection experience and then to set in motion some level of investigation training after they are hired. Sometimes the training is limited to "ride-along" instruction for a period of time with the help of a senior investigator. In other cases a more formal training program is applied. Clearly, the better qualified and more experienced a new investigator is, the more quickly he or she can make a viable contribution-to making good cases and bringing arsonists to justice.

Gainesville goes beyond this norm and requires extensive educational achievements for one to become a fire investigator. An applicant must meet or exceed the 'following high standards:

- Certification as a state of Florida law enforcement officer;
- Certification as a firefighter, fire investigator, and fire inspector; and
- College degree in the field of fire science or criminal justice.

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2.   *Aurora's Case Prioritization System*

Aurora's system for establishing priorities among cases is an excellent management tool, especially useful in circumstances where the number of arson cases continues to be high while budget cuts and attrition threaten to reduce manpower. Following is a synopsis of Aurora's system.

CASE PRIORITIZATION AND MANAGEMENT

Identification of Solvability Factors

Establishing case priorities requires an analysis of solvability factors. Solvability factors are defined as information about a crime that can provide the basis for determining the person(s) responsible for committing the crime. Not all incendiary fire cases can be solved, no matter how much investigative effort is put forth. Fire investigation resources are limited, therefore, it makes sense that the effectiveness of investigations will be increased only if resources are allocated to those incidents which have a chance of being solved. Following the determination of an incendiary act, solvability factors can provide a valuable guide to the allocation of limited investigation.

Solvability Factors include:

1.   Witness(es) to the crime

2.   Suspect name and location

3.   Suspect description

4.   Suspect opportunity

5.   Existence of significant modus operandi, i.e., pattern, arsonist, or bomber

6.   Presence of physical evidence

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7. Identification of a suspect vehicle

8. Belief that a crime may be solved with public information and/or support

At the conclusion of the investigation, the investigator must feel secure that all solvability factors have been identified.

Case Prioritization

The following is a scale utilizing solvability factors, and the department's priorities for a criminal case:

Priority		*Solvability Factors and Departmental Priorities*
A-l	I.	Arrest made, suspect in custody for crime, case filing within 48 hours
	II.	Danger to community by known arsonist/bomber
A	I.	Known suspects observed committing the crime
	II.	Physical evidence linking suspects (5 day follow-up of factors identified)

A. License plates of suspect vehicle

B. Full name of suspect and suspect seen, i.e.,

1. Suspect with gas can

2. Suspect in building/structure within 30 minutes of incendiary fire

3. Statements of suspect observing fire

III. High priority fire/explosions

A. Large dollar loss

B. Deaths

C. Public outcry - media inquiries, impact on community

D. Discretionary privilege - Investigations Lieutenant assigns

B	**I.**	Suspect(s) identified by partial I.D., i.e., First name only, last name only, etc.
	II.	Low dollar loss - under $200 to ***unoccupied*** structure or vehicle
C		Fire/Explosion
	I.	No suspect information
	II.	No leads
	III.	Does not meet A or B criteria
	IV.	Low dollar loss
	V.	Bomb threats - without witnesses Singular call to victim

3. *Pleasantville's Prosecutor Support*

More than a decade ago, the State of New Jersey took an unusually aggressive stand against arson. The State mandated that the Prosecutor's Office in every county serve as the organizational center of an arson task force, providing assistance to all communities within their jurisdictions. An example of how important a strong commitment from the prosecutor can be is found with Pleasantville, a small city in Atlantic County.

The Atlantic County Prosecutor's fire and arson investigation unit provides superb expertise in all areas of fire investigation. The procedures they follow to handle incendiary cases are among the best we observed during the course of this project. A Captain of Investigations from the Prosecutor's Office oversees the work of a sergeant and an investigator, both of whom specialize in fire investigation. These individuals review fire cases regularly throughout the county, assisting local communities with suggestions for enhancing case quality. In addition, they routinely participate in fire investigations in the county.

Arson cases going to trial from Pleasantville and elsewhere in Atlantic County are usually successful.

4. *Garland's Standard Operating Procedures*

The standard operating procedures we reviewed from the project sites varied greatly from no written procedures, to two pages of a procedures outline, and ultimately to the comprehensive well-written and well-organized procedures prepared by Garland's lead investigator. Garland's procedures stand out in part because they actually are based on standard police procedures for criminal investigation as adopted to fire department procedures in arson cases. The procedures manual covers everything from communications to the handling of evidence and suspects. Too lengthy to include in this report, the manual could, we suggest, be borrowed for reproduction from either the United States Fire Administration or the City of Garland, Texas Fire Marshal's Office.

5. *The Category Reporting System*

In several sites, Project Consultant Richard Crispen shared a system he used while Director of San Francisco's Arson Unit. The Category Reporting System was developed to assure consistent and complete reporting of all narrative investigative information. He found that prosecutors liked this system because it organized the case in a manner that facilitated preparation for court and prosecution. It is reproduced on the following pages for any community interested in establishing a new narrative report format or revising an existing one.

The Category Method of Reporting consists of nine (9) categories in the following sequence:

I. Summary

II. Exposures

III. Witnesses

IV. Investigation

V. Conclusion

VI. Evidence

VII. Injuries and/or Deaths

VIII. Suspects/Arrests

IX. Insurance

I. Summary

The summary shall be a concise and accurate explanation of what occurred, including the type of incident, how response was made, or who requested the response, and the time of request or time of arrival, if significantly different from the time of the incident. For a fire, indicate the area of origin, extent and manner of fire spread and the damage to building and contents. Communication to adjacent building(s) or structures should also be included and the damage described.

Example: This Unit responded automatically to a second alarm for a fire in a building. The second alarm was struck approximately forty minutes 'after the first alarm due to a natural gas explosion in the rear of the building. The fire originated at the front of the building in the tradesmens' entrance and extended via the wooden siding to the rear of the building and upwards, making entry at the second and third floors through the

windows. Damage to both building and contents was moderate. The fire extended to the adjacent building to the north and caused minor damage to the exterior rustic siding. (See "Exposures" below).

II. Exposures

This category shall be used when a fire extends from the original to another building; or if damages are sustained as a result of firefighting operations. It is not necessary to specify exact damages, other than area damaged, only total building damages.

Examples: 1. 236 Howard Street, 3-stories/type 5, apartments, rustic siding, moderate damage.

2. 226 Howard Street, l-story/type 1, machine shop, roof damage, minor damage.

* If necessary, the extent of damage may be more fully described in Category I, "Summary. "

III. Witnesses

Witness will be listed by last name, first and middle name (or initial), and listing shall include in the following order: race, sex, age or D.O.B., residence address, residence phone, business address and business phone, and the relationship of. the witness to the incident, i.e. passerby, friend of victim, neighbor, etc. Note: Listed witnesses shall be mentioned in VII, "Investigation," along with their comments/statements.

Include in this section firefighters and police officers with badge/star numbers and unit designation.

Examples: Smith, Patrick Louis, WM, 06/02/20, 220 Hugo St., (415) 664-8787, 770 Frederick St., (415) 664-8900, passerby.

Jordan, Arthur John, SFPD #64, Park Station

Murphy, Harry, SFFD #1213, Battalion 5.

IV. Investigation

This category should be written from the point of view of the first person. "This unit" can be used in place of "I" or "We."

The investigation into the origin and cause of fire is determined through a process of observation, examination and interview. The writer of the report should strive toward the basic qualities of expository style: clarity and brevity.

This category should describe in detail what was observed, what was examined, and include statements made by witnesses. The investigator is an instrument of justice and his point of view should be objective and impartial. The information given should be relevant. Everything relevant to the proof or disproof of the cause of fire must be included.

This category should be used to record all investigative facts established. Strive for accuracy and completeness and clarity. A thorough investigation leads to a logical conclusion.

V. Conclusion

The conclusion shall be directed at the cause of the fire and shall include a source of ignition, the combustible material first ignited and an event.

Example: Based upon the above investigation, it is the opinion of this Unit that this fire was probably initiated by the water heater pilot light, or burner igniting flammable vapors.

Example: Based upon my observation and information provided by witnesses, and pending further information and/or investigation, this Unit is listing this fire as probably caused by discarded smoking material igniting combustibles.

Eample: It is the opinion of this Unit that this fire was of incendiary origin.

Example: Based upon the above investigation and the lack of an apparent source of ignition in the area of fire origination, the cause of this fire is incendiary.

VI. Evidence

The investigator shall describe and itemize all physical evidence gathered at the scene. He will indicate the location where the evidence was found, by whom it was found, and the chain of custody. He shall state the whereabouts of the evidence at the time of the report and plans, if any, for analysis or further examination.

Photos of the scene shall be handled essentially the same and entered in this section.

Examples: A five (5) gallon container partially filled with flammable liquid (as determined by field test) was found in the rear of the building by Lt. Smith, E-36. Precise location was near the rear (west) fence. Smith posted the can for our review. Photos were taken of the can and some are presently in possession of this Bureau. The can was taken by investigator L. Wright to the S.F.P.D. Crime Laboratory for print analysis and will then be transported to

Alcohol, Tobacco and Firearms Laboratory at Treasure Island for determination of liquid type.

A badly burned lighter fluid can was found in the debris of the fire room. This can was discovered by Investigator Desmond and is being retained by this office. Tagged and marked; no further plans of analysis due to burned condition.

VII. Death/Injury

List and describe as for witnesses.   If previously listed as owner, occupant, reportee, manager, witness or suspect, again list by last name (CAPITALS), first name and middle initial, and relationship.   If an injury: describe the injury; include name of hospital and attending physician if treated, also names/numbers of ambulance personnel and station.   If a serious injury with the good probability of a later fatality, space should be left for an update. In the case of a death; include carbon monoxide percentage, alcohol content, drugs, date and cause of death.   (As indicated in coroner's register).

Examples:

Injury: Carter, Willie Andrew, BMA, occupant, broken leg, head
          lacerations, inhalation, to San Francisco General Hospital,
          treatment by Dr. R. Silva.

Death: Carter, Willie Andrew, BMA, occupant, 3rd degree/75% of
          body. C.O.-55% Alcohol .12%. Drugs NEG. (or N/L (not listed)).
          Death 07/09/79. Cause of Death: Thermal Cutaneous Burns.

- or -

VII. N/A

VIII. Suspects/Arrests

The individual(s) shall be listed with "suspect" or "arrest" prior to the name. If the name is unknown, the word "unknown" shall be written after. the designation suspect or arrest.   In the case of an unknown suspect, the investigator should endeavor to obtain as much information as available (including the modus operandi) and put it down.   This is also true in the case of a known suspect, but not necessarily so in the case of an arrest as this information should show on the police report which will be attached to the report.   The report, in this category, should list the information necessary to retrieve some once it goes into the computer. The booking charge should be included in this spot.

As for witnesses the information after the name should include in the same order:. Race, Sex, Age or D.O.B,, residence address, residence phone, business address, business phone, height, weight, build, hair (color & style), eyes (color & glasses?), complexion, physical defects. Clothing (color, style, condition). Identifying numbers, modus operandi, caution.

Example:

suspect: Carter, Willie Andrew, BM, Appr. 40 164 Turk ST., N/P, unemployed, 510, 165# medium build, black hair, brown eyes, no further description.   SF No. 116788, Assault on Peace Officer, road flare in debris box.

suspect: Unknown, BM, appr. 25/30, 60, 250#, heavy build. No further description. Sets fire to debris/rubbish under rear exterior stairs.

Arrest: Brown, Marcus Louis, BM, 10/22/21, 315 Divisadero St., N/P unemployed, 507, 145#, Black hair, Brown eyes, swarthy complexion, no apparent physical defects, SF No. S149630, Prior arrests for Arson, Sets fire to mattresses, etc. Heavy drinker.

- or -

VIII.   N/A

IX. Insurance

The following items not covered in B.F.I. Form I should be included in your report:

1. Adjusters
2. Coverage
3. Type of Policy
4. Settlement

Note: Insurance is listed last so that it can be updated as the information is made available to the investigator.

Examples:

Adjuster: The claim is being handled by ABC Adjusting Bureau.   Mr. John Jones, Phone No. 777-7777, is the adjuster assigned this loss.

Coverage: The insured is covered for $100,000 fire insurance on the building and contents, and $5,000 per month for business interruption, for a maximum of 6 months, or $30,000.

Policy
Information: The policy was issued June 1, 1978, for $60,000 and increased June 1, 1979, to $100,000.

Public
Adjuster: Name, address, and phone number of the adjuster representing the insured.

Settlement: The insured was paid $40,000 under the fire insurance coverage, and $7,500 under the business interruption policy.

CHAPTER FOUR

COMMON PROBLEMS WITH FIRE
INVESTIGATION MANAGEMENT AND OPERATIONS

The fifteen sites in this study differed in many respects. Despite their population and geographic differences, however, the locales shared a surprising number of similar problems. (Only a few of the areas needing improvement were found exclusively in one site or another.) Following is a discussion of the major problems discovered among the sites.

Fire Investigation Data and Data Management

Every site in the project exhibited problems with collecting an adequate amount of fire and arson investigation data. In one site it was a matter of adding several categories of data to a generally adequate data system and then improving the management and use of the data. However, in fourteen of the fifteen sites the problems with data were more serious and/or more numerous. Some of the problems included:

- Little if any consistent data collected and reported on investigated fires;
- No single data collection source where multiple agencies are involved in investigations. Separate and unlike data are kept by different investigation departments (usually police and fire) handling the same cases;
- Failure to share data;
- (For states and counties) No standard data reporting and fire investigation format; jurisdictions report different amounts of information (or none at all) in different ways;
- No information on the disposition of cases;
- Incomplete data on details of investigation, basic elements of the case, and suspects; and

- No data on juvenile firesetters and the extent of their responsibility for a jurisdiction's arson problem.

The problems with data are widespread and have serious consequences. Without a good base of information on fire investigations, it is impossible to detail the extent of the local or state arson problem; it is impossible to evaluate the success of arson control initiatives; it is difficult to determine the productivity and effectiveness of individual investigations and of a unit (consequently, at budget-slashing time managers have little to go on to defend staffing levels); it is hard to know where and how to direct arson prevention and control programs; and the good work accomplished by competent investigators goes undocumented, resulting in poor morale and high turnover.

Lack of Central Management or Clear Coordination

The second most frequently uncovered problem was the lack of a centrally directed fire investigation unit. Rather, it was common to find fire investigators reporting to fire managers and police investigators reporting to police managers with limited coordination. Typically, fire personnel handled the preliminary investigation, but then had to refer the case forward to law enforcement for the criminal investigation. In many of the sites this resulted in investigation delays, lost confessions, missed opportunities for witness statements, compromised physical evidence and contamination of the scene. Ultimately these cases went nowhere and failed to qualify for prosecution. The lack of a single manager or clearly articulated (and followed!) procedure for coordination was found to be extremely detrimental to effective fire investigation.

Case Review and Quality Control

More than half the sites were doing a poor job of regularly reviewing incendiary cases and overseeing quality control. More often than not, managers were not checking the

quality of cases periodically or tracking the status of investigations over time. As a result, some cases were getting lost in the shuffle, including cases that should have been pursued.

Workload Balance

Only a handful of sites had what could be considered a reasonable workload per investigator. Either investigators were tasked with too many cases to handle properly (generally, more than 75 cases per year for full-time dedicated investigators), had too many other assignments, had too large a geographic area for the number of cases, or, in a few situations, had too few cases.

Cooperation from Prosecuting Attorney

Despite generally reported gains in cooperation between the designated Prosecutor's Office and fire investigators, most sites in this project had problems obtaining consistently reliable assistance from prosecutors. However, it was also true that once this problem was identified and discussed with prosecutors, they were quick to respond in correcting the situation. The three most common problems were:

- Failure to accept any but, the most clear-cut., winnable cases;
- Failure to use or confer with the primary investigator during case development and trial; and
- Failure to communicate back down the line as to the ultimate disposition of arson cases.

Juvenile Education and Intervention Programs

Given the strides made in the last ten years with the development of juvenile firesetter counseling programs, it was surprising to find that very few of the sites had established their

own intervention programs to deal with juveniles setting intentional fires. Not only were in-house programs or referrals to other agencies (e.g. usually, mental health agencies) hard to find, but many sites kept no records of juvenile involvement in firesetting, and did not know to what extent this problem existed in their community or state.

Training for Suppression Forces

All but a few sites need to establish or reconvene arson detection courses for suppression forces to improve the quantity and quality of first-due company reporting to the investigator, and to reduce the problem of premature overhaul at the scene.

Moreover, it was found that overtime and burnout for investigators could be reduced if some basic origin and cause training were provided to selected, interested firefighters on each shift, to company commanders and to volunteer departments relying on mutual aid from paid, investigators in neighboring jurisdictions, or from the State Fire Marshal's Office. Basically, investigators were being called out all too frequently to fires that quickly were determined to have an accidental fire cause. Many of the sites need to extend training programs to include origin and cause for personnel who can rule on causes without calling out the investigators for almost every incident.

Weapons and Power of Arrest

More than a few sites were discovered to be in the process of resolving legal and procedural problems pertaining to arming fire investigators and authorizing them with power of arrest. There appears to be a trend away from allowing fire investigators to carry weapons, and some sites had taken the step of removing this authority from the investigators. There have been repercussions. If fire investigators can no longer make arrests or protect themselves while investigating a fire, then law enforcement personnel must pick up the slack and handle arrest and protection responsibilities. Unfortunately, sometimes prior consent

was not sought or obtained from police detectives and sheriffs deputies before these changes in weapons policy were instituted, and law enforcement was not taking over the cases.

Written Standard Operating Procedures

The majority of sites had very limited or no written procedures for everything from how and when investigators are called out to how to handle a suspect.   As a result, investigators often remarked that they each had their own way of responding to calls or operating on the scene, or preparing reports.   New recruits followed the lead of whoever did most of their field training, and the lack of clear rules and guidelines made managing operations and reporting difficult. Written standard operating procedures are valuable and necessary.   Most of the sites were advised to upgrade theirs.

CHAPTER FIVE
IMPACT OF THE PROJECT'S MANAGEMENT ASSISTANCE

Discussion

From the beginning of this project, the USFA was interested in knowing not only how *much* technical assistance was provided to the participant and what *aspects* of management and organization were in most need of improvement, but what *changes* were implemented as a result of the project staffs' efforts. It is the impact of the assistance and the new initiatives that it stimulates that ultimately proves the relative success of any technical assistance project. Another measure is the usefulness of the published results to communities that read the report.

To document our extent of success in each locale, we prepared an Impact Assessment Form covering all potential areas of change. Not all categories applied to all sites, but each category applied to at least one site. A copy of the Assessment is found at the end of this chapter. The Assessment was organized according to the following sections and the results are presented in the same order:

SECTION 1 - INVESTIGATION UNIT
- Training
- Operating Procedures
- Staffing Changes

SECTION 2 - DATA AND REPORT MANAGEMENT
- Investigation Reports
- Data Processing
- Statistics
- Case Tracking

SECTION 3 - ADMINISTRATION

   Workload Issues

   Personnel Management

   Scheduling

SECTION 4 - INTER-AGENCY COORDINATION

   ▬ Fire and Law Enforcement

   ▬ Mutual Aid

   ▬ Prosecutor

   ▬ Insurance Industry

SECTION 5 - ARSON PREVENTION

   ▬ General Awareness and Prevention Efforts

   ▬ Juvenile Firesetter Counseling Program

GENERAL QUESTIONS SECTION

Summary of the Project's Impact

The United States Fire Administration's Fire Investigation Management Assistance Project had a 'positive impact in sites participating in the project, according to the fourteen participants that documented the changes brought about at least in part because of the technical assistance. One site -- the District of Columbia had not yet completed the Impact Assessment Form at the time of this report. This was the last site to receive technical assistance and they did not have an opportunity to organize a response to our recommendations prior to the report deadline.

Investigation Unit

All respondents reported making changes or scheduling future changes in their investigation unit's makeup, training or operating procedures as a result of the technical assistance and recommendations made during the project.

Most of the participants have augmented or improved fire investigation training programs.   For half of the respondents, this included initiating or repeating basic fire investigation training for their suppression units.   Several of the participants also added new local fire investigation courses or pursued admission to more courses offered by their respective States, the National Fire Academy, and others. For example, Gainesville Fire Rescue has added a computer/word processing course at the local level and courses from the regional and state International Association of Arson Investigator Schools. Mohave County has made arrangements to make Arizona's state-level fire investigation course available to local investigators, and Asheville has taken steps to enroll one of its investigators in the Advanced Arson-For-Profit course at Glynco, Georgia.

Based on the recommendations from the technical assistance site team during the project, the Tennessee State Fire Marshal has recommended that jurisdiction over the State Fire School be transferred from the Board of Regents to the State Fire Marshal's Office.

Two investigators from the Aurora Fire Department have received vocational training credentials. This makes them candidates for "train-the-trainer" courses conducted by state fire academies and others.   In addition, it legitimizes the in-house courses they teach and enables these courses to be credited in investigators' resumes.

More than half of the participants have developed or revised standard operating procedures for handling fire investigations and made some staffing changes as a result of the project. The magnitude of changes varied among departments as would be expected. The creation of an Arson Task Force in Asheville stands out as the most comprehensive.   This

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was one of the major recommendations following the technical assistance site visit during the project.

Five departments changed call-out procedures based on the technical assistance site visit and report.

Some departments also made specific assignments of investigators more specialized. In Mohave County, for example, district boundaries were altered to coincide with those used by the local Sheriff's Office, and a District, Coordinator was assigned to supervise and serve as liaison with the Arson Task Force. In Kitsap County, a lead investigator position was. established, and Aurora designated one investigator to specialize in cases involving juveniles and to handle arson-related public education.

Asheville, Baltimore County, Garland, Humboldt County and the Tennessee State Fire Marshal's Office have initiated or completed a restructuring of their investigative units. In Asheville, this involved setting up a rotation of investigators on-call from 6:00 p.m. to 6:00 a.m. and throughout the weekend. Baltimore County designated three Senior Investigators to lead investigations and assist supervisors, while Humboldt County began the process of adding more law enforcement personnel to the unit.

The Tennessee State Fire Marshal's Office is considering creation of five teams each consisting of one Investigator and one Detective. This would involve bringing aboard a new Detective and reducing the number of Investigators currently assigned. In addition, the TSFM Office is considering adding one Lieutenant to the unit to handle false alarms and its juvenile firesetter programs.

In Garland, one additional investigator was selected from the Fire Department's cause and origin group and assigned as a full-time arson investigator. The assignment is classified as "temporary" due to the lack of position funding in the Fiscal Year 1991-92 budget for the department; funding for the 1992-93 budget year is to be considered by the Garland City

Council. Even so, the assignment has provided valuable on-the-job training for the individual assigned. In addition, the arrangement has provided the department with an available and on-call investigator to back up Garland's regular arson investigator. The Garland Fire Department also has rewritten the job description for the Fire Marshal position, based on recommendations made during the project. The position, which is appointed by the City Manager, was expected to be filled sometime in early 1992.

The State of Nevada was dealt a serious budget cutback by the State's Budget Office just a few weeks after our technical assistance visit. As a result, many of the initiatives they had hoped to pursue have had to be put on hold. They actually have lost staff due to attrition and illness.

Data and Report Management

All sites submitting project assessments indicated they have made changes in their data collection, case tracking and investigation reports as a result of technical assistance provided during the project. Six departments -- Aurora, Baltimore County, Imperial County, Humboldt County, and Kitsap County and the State of Nevada -- have successfully changed from manual systems to computerized data processing, and the majority of participants have taken steps to install and use the new version of the Arson Information Management System (AIMS) software.

Several departments have expanded their use of investigation and arson statistics. This includes, analyzing data and monitoring trends more frequently than they did before the project and including data in periodic reports to local legislators and other government officials as well as superiors within the Department. The Tennessee State Fire Marshal's Office and Imperial County also are using trend data to help them make decisions about program resources and investigation management.

The majority of the participants have standardized the format of investigation reports as a result of the project. Gainesville and the Tennessee State Fire Marshal's Office have expanded the types of fire and arson data that are routinely collected. Gainesville's report format has been expanded as well, to include such information as motive, dollar loss, jurisdictional boundary, suspect names and arrests made.

In addition to substantive changes in investigative reports, three departments -- Norfolk, Asheville, and Kitsap County -- have set tighter deadlines for submission of reports to ensure that fire incidents and investigations are thoroughly documented while information is freshest, and to ensure timely follow-up work.

Administration

The majority of participating departments have implemented administrative changes related to workload, scheduling and personnel management as a result of the project.,

In most cases this involved adjusting the number of cases assigned to individual investigators. For example, Imperial County, Mohave County and the Tennessee State Fire Marshal's Office re-assigned cases so that all investigators have approximately the same number. Asheville, Aurora and Kitsap County chose to increase the number of cases per investigator. Several departments also established a system for prioritizing cases, to allow for greater focus on more important cases.

Other administrative changes involved personnel management and staffing issues. Norfolk and the Tennessee State Fire Marshal's Office made changes in personnel management policies. Both took steps to improve their performance review systems, including writing individual goals for each investigator. Norfolk also adjusted shift work hours to correct scheduling problems and reduce overtime that resulted after the loss of one of its investigators.

The Tennessee State Fire Marshal's Office also established a 37.5-hour work week, with flexible schedules Sunday through Saturday. This helps reduce overtime and provides more available on-case time per unit member. Baltimore County is investigating the possibility of adjusting investigators' schedules to match those of detectives, so that investigators and detectives can work in two-person teams.

Inter-Agency Coordination

All participants noted progress in improving coordination among agencies -- fire and law enforcement officials, prosecutors and the insurance industry -- involved in successful resolution of cases.

The majority have improved communications between police and fire agencies, including the exchange of data and reports. Other improvements include setting up new or strengthening existing joint fire and police investigation teams, assuring completion of UCR Reports for all incendiary fires and requiring that reports be forwarded, and increasing the participation of law enforcement personnel in investigations. Norfolk also has succeeded in establishing a closer pre-trial exchange of case information with the Commonwealth Attorney's Office. The State of Nevada instituted cross-training in the field for police and fire investigators.

Almost all of the departments have improved coordination related to mutual aid as a result of the project. In most cases this involves formalizing or improving mutual aid agreements with neighboring jurisdictions for investigation assistance. In addition, Gainesville has improved inter-agency coordination by utilizing cross coverage by investigators from the Florida State Fire Marshal and County Fire Marshal offices and providing arson dog services throughout North Florida. Norfolk is improving its mutual-aid related coordination with other agencies by participating in the regional response team concept and providing assistance on out-of-jurisdiction major fires. Pleasantville has

established an investigators association to foster the exchange of information and training among agencies.

Nine departments have made strides in improving coordination with prosecutors. In most cases, the departments have succeeded in getting earlier and better support on arson cases from the prosecutors' offices, and in about half of these sites, the prosecutor's office has become a participant in the local arson task force. Several also have facilitated participation by prosecutors in arson training classes, and Gainesville has succeeded in getting two Assistant State Attorneys trained at FLETCO and equipped to respond to fire scenes. The City of Columbia/Richland County has succeeded in opening communications channels between the fire chief and the prosecutor's office which had not existed prior to the project.

The project has assisted nearly half the participants in improving coordination with the insurance industry. Gainesville, Kitsap County, Mohave County and the Tennessee State Fire Marshal's Office have succeeded in getting better cooperation from the insurance industry on arson prevention programs. In addition, Gainesville, Imperial County and the Tennessee State Fire Marshal's Office have seen increased sharing of information on pending arson cases. Gainesville even received funding from a national insurer to support training of an arson dog and handler.

Arson Prevention

A majority of the reporting participants have taken steps to increase public awareness of arson and encourage prevention efforts as a result of the project.

New arson tipster hotlines have been established in Imperial County and Mohave County. Gainesville and the Tennessee State Fire Marshal's Office have established undercover operations and a system of informants as well as set, up hotlines. In addition to initiating the use of undercover operators and informants, Aurora has created new

neighborhood programs aimed at improving general arson awareness and prevention efforts. Some of the participants also have succeeded in getting lessons on the dangers of firesetting incorporated into elementary school fire safety curricula.

Seven of the participants also 'have seen improvements in their juvenile firesetter counseling programs. Aurora, Baltimore County, Kitsap County and Pleasantville run in-house programs within the fire department, with Aurora and Kitsap County also using outside counselors and agencies. Humboldt County and the Tennessee State Fire Marshal's Office use outside counselors and agencies exclusively. The State of Nevada has expanded its network of referring agencies to include schools, police, social workers, and so forth.

As a result of the project, Aurora also has made significant strides in its juvenile firesetter program. It has expanded its network of referring agencies to include schools, police, line companies, social workers and others in the community. In addition, it has developed a Juvenile Arson Mitigation Task Force that includes investigators, the local prosecutor, the social service agency, state and local school counselors and representatives of the state probation and education systems. Aurora also has succeeded in developing a means of evaluating the impact of its counseling program.

Outcomes

While the ultimate measure for participants of the success of efforts initiated as a result of the project would be reductions in the number of confirmed arson fires and a commensurate increase in the numbers of cases with arrests and convictions, it is too early in most cases to see such results. Some departments feel that the number of arson fires continues to increase and a variety of fiscal and other problems have been encountered by departments as they attempt to implement recommendations from the project.

However, most participants credit the project as the catalyst for enabling them to begin the necessary steps to achieve real reductions in the arson problem. Here are a few quotes describing the impact of the project:

Quotes From Local and State Participants

Pleasantville - "Since your report the Police Department's Detective Bureau has been very cooperative. " "Your visit brought this unit some recognition from city officials."

Kitsap County - "I thank you for all that you have done . . . . the seed has been planted . . . we do have involvement of law enforcement to the point that a detective will be attending the Fire/Arson class at the National Fire Academy."

Gainesville - "The principal way in which the management assistance project assisted us was to provide an array of methodologies by which other communities have solved some of the problems that we were encountering."

"(We have had) some success . . . most notably in the area of obtaining the cooperation and assistance of the local state attorney who assigned specific prosecutors who specialize in arson. They have now been through their first phase of training and are being equipped to respond to arson scenes so they can see firsthand the evidence which they will be presenting in court. This relationship has already proven fruitful in that arson is being seen more seriously, not just by these prosecutors but by others in their offices as well. We've also been successful in approaching the private sector in our community in getting donations so that completely without public funding we were able to implement the use of an arson accelerant detection dog (canine program). A regional office of Nationwide Insurance donated the funds for acquiring and training the dog and handler and a local veterinarian has volunteered to care for the dog. The use of this dog is available on a region-wide basis and that use is currently increasing as more and more neighboring jurisdictions make use of it."

"As mentioned previously, one of the home-grown ideas which came from the visit of the USFA management assistance project was that of having the Division Manager become certified as a police officer so he would better understand the process of investigation and the types of results which could be expected from a well-functioning arson team. The additional credibility with police agencies and fellow arson investigation agencies throughout the State has been an added plus."

Baltimore County - "Both Police and Fire are (pursuing) the team concept based on the site study, which is involving personnel changes, work schedule changes along with case assignment.   Furthermore, additional criminal investigative training for investigators is being pursued.   The study also has been used in justification for upgrading data collection and case management with the unit acquiring a computer."

Aurore -- "GREAT PROGRAM. . . . The review was a catalyst for a new computer, report format changes, and increased support for a juvenile education program. When USFA comes across unusual tools, techniques, etc., could a profile pamphlet detailing such be printed?"

Asheville - "(We have received) a commitment from the District Attorney to spearhead an . . . . arson task force for Buncombe County.

District Attorney Moore has received the endorsement of the Buncombe County Board of Commissioners, the Asheville City Council and the Buncombe County Firefighters Association.   We are now in the process of preparing a proposal for initiating a permanent task force, and for funding of an additional arson investigation position.   We have been informally advised that this additional position will be granted by the county's Board of Commissioners."

"As far as we're concerned, the money invested in this technical assistance program has already generated a sizable 'return on investment.' I'd also like to note that the internal recommendations proposed as a result of the study have been implemented."

"I hope that other communities will be able to benefit from the opportunity that we had via this program."

"If there is any point where anyone calls you for information on the value of this project, or on the conduct of the project itself, please do not hesitate to refer those callers to me."

Garland - "The City of Garland and Garland Fire Department wish to thank the United States Fire Administration and TriData for the audit of the Fire/Arson Investigation Section. The Fire Department has rewritten the job description for the Fire Marshal position outlining the desired qualities and qualifications in the draft report . . . . The Department has chosen to use the AIMS program supplied by USFA (and) the Department plans to form an Arson Investigation Committee in the near future."

Imperial County - "We thank you for the Fire Investigation study; we feel it was most beneficial. However, due to. our budgetary constraints it could be a year or so before we can implement (your recommendations)."

State of Tennessee - "The USFA management assistance project helped (by giving us) outside, unbiased support of (our) arson investigation control and management projects."

Columbia - "We very much appreciate the work that you did for us. I believe that your efforts have produced a high quality report that realistically plots a direction for our program, and we intend to follow your recommendations closely. Your project has laid the

groundwork for a good working relationship at the organizational-, rather than just the individual level."

Key Results Site-By-Site

The preceding section summarized the changes and improvements made among the fourteen sites reporting. Here we present a synopsis of the key results by site. This is not a comprehensive accounting of all the changes noted by these sites, but, is an itemization of the most significant changes made to date by those participants reporting.

Site	*Project Impact*
Aurora, CO	Added specialized function to handle juvenile cases.
	Purchased computer and began using A.I.M.S.
	Created regional arson task force.
Baltimore County, MD	Restructured fire investigation unit; created five police/fire teams for *greater* coverage at *lower* cost.
	Acquired computer to implement A.I.M.S.
	Improved training.
	Improved coordination with prosecutor.
Asheville, NC	Established formal metropolitan task force.
	Succeeded in getting District Attorney to head up task force and to designate assistant D.A. to handle arson cases.
	Added training courses.
	Revised SOP's for investigation.
	Restructured assignments; District Chiefs now responsible for C&O.

Gainesville, FL	Expanded training.
	Revised SOP's.
	Expanded and improved arson data collection and management.
	Implemented A.I.M.S.
	Strengthened law enforcement skills of investigators.
	Improved police/fire communications on arson cases.
	Formalized mutual aid agreement.
	Two prosecutors now trained and prepared to respond to fire scenes.
	Obtained insurance industry cooperation in arson control programs.
	Created arson prevention education programs.
	Established undercover operations.
Pleasantville, NJ	Improved training records
	Implemented A.I.M.S.
	Now receive better cooperation from police on investigations.
	Established Investigators Association to exchange information and training.
	Organized formal, in-house juvenile firesetter program.
Kitsap County, WA	Initiated basic arson awareness training for suppression units.
	Created new SOP's county-wide.
	Established lead investigator position.
	Standardized reports and established 24-hour notice form for suppression company use.

	Changed to computerized data management; reduced delays in report processing.
	Established joint fire/police investigation team.
	Formalized mutual aid.
	Obtained prosecutor commitment to assign Assistant to all arson cases.
	Improved data sharing and communications.
Mohave County, AZ	Added local investigation courses.
	Improved investigation SOP's,
	Restructured assignments; added staff.
	Standardized reporting.
	Implementing A.I.M.S.
	Strengthened joint police/fire teams; formalized mutual aid.
	Added prosecutor to local task force.
	Established hotline/tipster program.
Norfolk, VA	Improved training records.
	Standardized report formats; set tighter deadlines for submission.
	Reduced data processing delays, implemented A.I.M.S.
	Established regional response team.
	Generated better support from D.A.
State of Tennessee	Made major recommendation to transfer State Fire School from Board of Regents to State Fire Marshal's Office.
	Restructured the unit; now have three senior investigators to lead investigations and assist the supervisors.

	Implemented A.I.M.S.
	Standardized report format and expanded data collection. use data now for analysis of arson problem and trends.
	Instituted case prioritization system.
	Better performance reviews.
	Changed scheduling to flextime to reduce overtime.
	Strengthened joint fire and police investigation teams.
	Better support from prosecutor.
	Established arson hotline and improved prevention and uncover efforts.
Imperial County, CA	New SOP's for investigation
	Changed call-out procedures
	Strengthened law enforcement authority and skills of investigators.
	Now use trend data to determine program resources and investigation management.
	Equalized workload among investigators.
	Improved mutual aid for investigation assistance.
	Obtained better cooperation from insurance industry.
Humboldt County, CA	Improved training records and pursuing more courses.
	Implementing new county-wide fire investigation form.
	Restructured unit by adding more law enforcement personnel.
	Securing a computer.
	Improved tracking of cases.

	Strengthened police/fire team.
Garland, TX	Rewrote Fire Marshal's job description.
	Added one additional full-time investigator position.
	Expanded role of origin and cause investigator.
	Improved case tracking.
	Re-designed and strengthened juvenile education counseling program.
	Implementing A.I.M.S.
	Plan to form Arson Investigation Committee.
Columbia, SC	Improved training records and training opportunities.
	Developed better call-out procedures to prevent overuse of investigator(s).
	Budgeting for State Constable Commission for investigator.
	Added investigation staff.
	Expanded investigation report format.
	Changed to computerized, A.I.M.S. system.
	Use arson statistics for trend data and more reporting.
	Established case tracking system.
	Instituted case prioritization system.
	Strengthened law enforcement skills of investigators and improved communications.
	Established communications with prosecutor's office.

IMPACT ASSESSMENT FORM

FIRE INVESTIGATION MANAGEMENT ASSISTANCE PROJECT
IMPACT ASSESSMENT FORM
Please Read Carefully

Please answer the following questions as best you can pertaining to any changes that you may have made to your fire investigation procedures and or management system since participating in the U.S. Fire Administration's fire investigation unit management technical assistance project.

We are trying to identify and quantify the impact that this project has had in the participating sites, and to document how the on-site technical assistance and written report assisted you. We ask about potential impact in six areas: the investigation unit, data management, administration, inter-agency coordination, arson prevention, and outcomes. Under each of these sections we present a list of possible actions you may have taken or results you may have obtained. Just check all that apply. If you have implemented changes other than those listed, please note them under the category, "other" and describe. We also strongly encourage you to add narrative statements and comments to provide more details.

Thank you very much for helping us to evaluate this project. The approach here may even raise ideas that help you to evaluate your own efforts further. Your cooperation is needed and is appreciated. If you have any questions, please contact Hollis Stambaugh at TriData (703) 351-8300.

community: _____

Primary Contact:_____

Person Completing this Assessment: (Name and Title)_____

Phone: _____

Date(s) of On-Site Technical Assistance:_____

Date of Final Field Report:_____

Please check any of the following you have implemented since the USFA technical assistance site visit and report. ONLY NOTE CHANGES OR NEW INITIATIVES.

SECTION 1 - INVESTIGATION UNIT

Training

_ Initiated or improved training records.

_ Added new local fire investigation courses. (Please identify)

_ Expanded the frequency or availability of courses.

_ Pursued more state-level courses.

_ Pursued more National Fire Academy courses.

_ Initiated or repeated basic fire investigation training for
    suppression units.

_ Other; please describe:

Operating Procedures

_ New or revised written SOP's for handling fire investigations.
    What did you add or change?

_ Restructured specific assignments of investigators.

  _ More specialized? Please elaborate.

  _ Less specialized? Please elaborate.

_ Changed call-out procedures.

_ Other; please describe:

Staffing Changes

_ Strengthened law enforcement authority and skills of fire
    department investigators.

_ Added investigation staff.

_ Decreased number of investigation staff.

_ Restructured unit. How?

_ Other; please describe:

SECTION 2 - DATA AND REPORT MANAGEMENT

Investigation Reports

_ Expanded the types of fire investigation and arson data
    that are routinely collected.

_ Standardized the report format.

_ Expanded the report format.
    What new sections were added?

_ Set tighter deadlines for submission of reports.

_ Other; please describe:

Data Processing

_ Changed from manual system to computerized data management

_ Reduced delays in report processing

_ Implemented the new version of AIMS

_ Added administration staff to handle data processing

_ Other; please describe:

<u>Statistics</u>

_ Increased frequency of data analysis (e.g. from quarterly to monthly reports).

_ Now prepare periodic analysis of investigation and arson experience and
   monitor trends.

_ Use trend data to make decisions about program resources and investigation
   management.

_ Now utilize data in monthly and annual reports to Chief of Department, local
   legislators, Mayor or County Commissioner, City Manager, etc.

_ Other; please describe:

<u>Case Tracking</u>

_ Established/improved system for tracking status of cases.

_ Monitor status of cases to check for unusual delays or other problems.

_ Update case records as new information is obtained.

_ Other; please describe:

SECTION 3 - ADMINISTRATION

<u>Workload Issues</u>

_ Altered workload per investigator.

      (Please check one) _ fewer cases per investigator.

                                _ more cases per investigator.

                                _ equalized number of cases among investigators.

_ Added administration staff to reduce administrative tasks for investigators.

_ Instituted case prioritization system to allow focus on more important cases.

_ Other; please describe:

Personnel Management

_ Instituted better system of periodic and annual performance reviews,

including writing individual goals for each investigator.

_ Other; please describe:

Scheduling

_ Changed shift work hours to correct scheduling problems and to reduce overtime.

Please describe:

_ Other; please describe:

SECTION 4 - INTER-AGENCY COORDINATION

Fire and Law Enforcement

_ Established or strengthened joint fire and police investigation team.

_ Instituted greater participation in investigations by law enforcement.

_ Instituted cross-training for police or fire investigators.

_ Strengthened law enforcement authority and skills of fire department investigators.

_ Improved communications and transfer of data and reports between

police and fire agencies.

_ Assure completion of UCR Report for all incendiary fires and require forwarding of

Report.

_ Other; please describe:

Mutual Aid

_ Formalized or improved mutual aid agreement with neighboring

jurisdictions for investigation assistance.

_ Other; please describe:

<u>Prosecutor</u>

_ Succeeded in obtaining earlier and better support on arson cases
      from the prosecutor's office.

_ Succeeded in having designated prosecutors assigned to arson cases.

_ Added the prosecutor's office to the local arson task force.

_ Facilitated prosecutor participation in arson training classes.

_ Other; please describe:

<u>Insurance Industry</u>

_ Obtained better cooperation from insurance industry on arson prevention
      programs.

_ Obtained better cooperation from insurance industry in sharing
      information on pending arson cases.

_ Added insurance representatives to local task force.

_ Other; please describe:

SECTION 5 - ARSON PREVENTION

<u>General Awareness and Prevention Efforts</u>

_ Created new neighborhood arson prevention program(s).

_ Established arson tipster hot line.

_ Incorporated lessons on the dangers of firesetting into elementary
      school fire safety curricula.

_ Established undercover operations and system of informants.

_ Began teaching arson awareness and prevention to occupants of
      high-rise commercial and residential buildings.

_ Other; please describe:

<u>Juvenile Firesetter Counseline Programs</u>

_ Organized or improved <u>formal</u> juvenile firesetter program.

    _ In-house program within fire department?

    _ Use outside counselors and agencies?

    _ Have means of evaluating impact?

_ Expanded network of referring agencies to include schools, police,

    line companies, social workers, etc.

_ Other; please describe:

SECTION 6 - OUTCOMES

One of the most conclusive means of documenting the success of your operational and program changes in fire investigation and arson prosecution is to examine the bottom line: the change in your arson statistics. Please complete the following to the best of your ability. You may need to consult with the police department or the prosecutor's office for some of this data. Provide what information you can, even if not all is available.

| | **YEAR** | | | |
| Data Item | '88 | '89 | '90 | '91 (through 6/30) |

1. No. of fires
   a. Structure fires
   b. Vehicle fires
   c. Other
2. No. of fires investigated
3. No. of cases ruled as:
   a. Accidental
   b. Incendiary
   c. Undetermined
4. No. of cases with arrests
5. No of cases cleared
6. No. of cases accepted by
   prosecutor
7. No. of cases with
   convictions

GENERAL QUESTIONS

1. What problems have you encountered recently (since we visited) and how did you overcome them?

2. Are there any other ways that the USFA management assistance project helped your community assess and improve your fire investigation and arson control work?
   Please explain:

3. Are there any other ways that the USFA management assistance project <u>could</u> assist your community in fire investigation and arson control work? Please explain:

THANK YOU! PLEASE CALL IF YOU HAVE ANY QUESTIONS. FEEL FREE TO INCLUDE ANY DOCUMENTATION THAT WOULD SUBSTANTIATE OR ELABORATE YOUR ANSWERS AND WHICH WOULD CONTRIBUTE TO THE FINAL REPORT.