

LEGISLATIVE AUDIT COMMISSION



Management Audit
State Fire Marshal's Fire Investigations
June 1999

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MANAGEMENT AUDIT

STATE FIRE MARSHAL'S FIRE INVESTIGATIONS

JUNE 1999

RECOMMENDATIONS - 7

House Resolution No. 486, adopted May 21, 1998, directed the Auditor General to conduct a management audit of the State Fire Marshal's role in fire investigations. The audit's objectives called for review of the following:

- Timeliness of the Fire Marshal's investigation;
- Policy or protocol statements; and
- Use of overtime compensation.

On December 15, 1997, the Office of the State Fire Marshal (OSFM) merged arson investigators into the Fire Prevention Division and established a protocol which specified OSFM's policy for responding to requests for arson investigators. These changes were intended to improve the accountability of investigators who work from home. The results of the audit were as follows:

- The protocol stated investigators would respond immediately to fires involving a fatality, while other fires would normally receive a response during daylight. The prior OSFM policy was to investigate nearly all types of fires immediately. Most other states' fire marshals and Illinois' fire chiefs said in a survey their investigators respond immediately or as soon as possible to most fires.
- OSFM overall response was quicker prior to the establishment of the protocol.
- Controls over the arson investigation program were strengthened resulting in less overtime and cases being closed faster.
- Controls need further improvement. The number of investigations conducted annually varied significantly by investigator from 8 to 91 investigations. The auditors' sample of investigations revealed that many did not collect physical evidence (37%); conduct interviews (24); or report arson/undetermined fires to police (18%), although there was improvement after the 1997 reorganization. Investigation reports were not reviewed by supervisors, and the policy to have investigators review each others' reports was not complied with in almost half of the cases sampled.
- The arson investigation program lacked adequate supervision. Supervisors were not certified arson investigators as they were before the 1995 layoffs. Two-thirds of other states' fire marshals, and three-fourths of Illinois' fire chiefs who responded to the auditors' survey said their supervisors were certified investigators.

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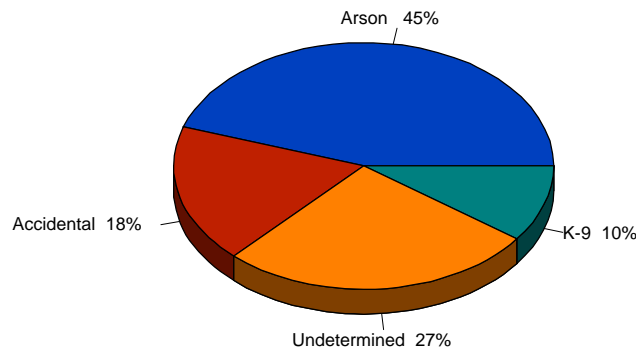
- The amount of accumulated compensatory time increased significantly from 104 hours on June 30, 1995 to 2,452 hours on December 15, 1997. After the reorganization, accumulated compensatory time declined to 2,189 hours on July 1, 1998. However, compensatory time records for 14 investigators had discrepancies.

STATE FIRE MARSHAL'S ROLE

The mission of the Office of the State Fire Marshal (OSFM) is to reduce death, injury, and property loss from fires and other hazards. When requested, OSFM's 19 investigators assist the local fire service of Illinois to determine the origin and cause of fires, and may help apprehend suspected arsonists. This service is requested mainly by rural or volunteer fire departments who lack trained investigators. In FY98, 19 OSFM arson investigators handled 1,017 cases.

OSFM Cases

Fiscal Year 1998



The OSFM sponsors exams for Certified Fire Investigators and Certified Arson Investigators. Fire investigators determine the origin and cause of fires. Arson investigators have the additional authority to identify and apprehend suspected arsonists.

As of June 30, 1998, OSFM had certified 421 arson investigators and 1,343 fire investigators in the state, at local fire departments, insurance companies, etc. Those numbers increased to 431 arson investigators and 1,405 fire investigators by January 1999.

ESTABLISHMENT OF PROTOCOL

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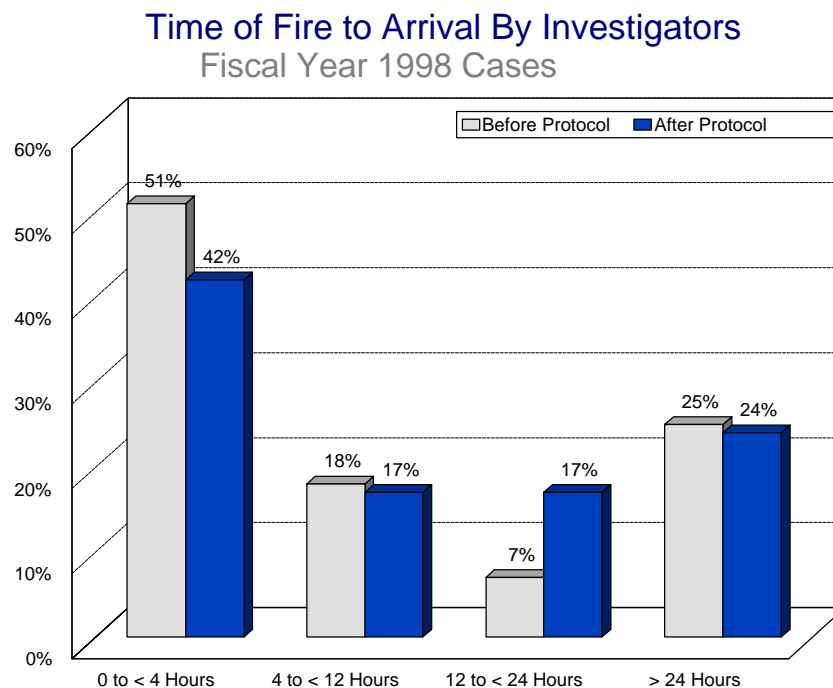
On December 15, 1997, the OFSM established a protocol which sets guidelines and priorities for arson investigators to respond to fires. The protocol has four codes. Code 1 is for fires involving a fatality and receives an immediate or quick response; Code 2 is for injuries; Code 3 is for suspicious fires and receives a response during daylight hours; and Code 4 is for smaller fires, such as car or garage fires, and receives a response the next business day. Previously, the written policy was that response to small fires could be delayed until daylight.

The protocol made two important changes:

- 1) Investigators could no longer be called directly, but must be requested through the Arson Hotline or OSFM supervisor. The practice of fire chiefs and police calling investigators directly resulted in little accountability and control over arson investigators' activities. There was a higher number of calls and accumulation of compensatory time.
- 2) Suspicious fires which were the primary responsibility of the arson unit became third priority and could be investigated during daylight hours the same day or the next day. OSFM officials said the protocol is intended to give priority to fires causing deaths, injuries, and major economic loss.

RESPONSE TIME

The auditors reviewed the time that elapsed between the fire and arrival by investigators and found the response time was quicker before the protocol in most cases.



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As shown in the chart on the previous page, OSFM investigators arrived within four hours of the fire in 51% of the cases sampled before the protocol, as compared to 42% of the cases after the protocol.

The report notes that other states' fire marshals said their investigators responded immediately or as soon as possible to nearly all types of fires, similar to OSFM's policy before the protocol. Following is a comparison of response policies between Illinois' OSFM and other states' fire marshals:

Comparison of Response Policies Fiscal Year 1998				
Protocol Code	Type of Fire	OSFM Response Policy	Immediate or ASAP Other States	ASAP IL Fire Chiefs
1	Fatality	Immediate	92%	90%
2	Injury/Major Economic Impact	Same or next day	73%	90%
3	Suspicious	Same or next day	73%	89%
4	Garage/Car/Barn	Next business day	63%	81%

The new protocol has response priorities that differ from other states and Illinois local fire departments. The new policy also differs from what practitioners suggested should be the response priorities, namely immediate response with the exception of small fires. The change increased the time it took for arson investigators to arrive at fire scenes to investigate the cause of the fires.

Some local fire departments who use the arson investigation program expressed reservations about the protocol because they had to keep the fire scene secure to protect evidence until the investigators arrived. Quick response helped investigators talk to witnesses and take pictures, and residents could return to their homes or businesses more readily. OSFM officials indicated they are reviewing the arson investigation program and are considering changes to their response times.

CASELOAD AND OVERTIME

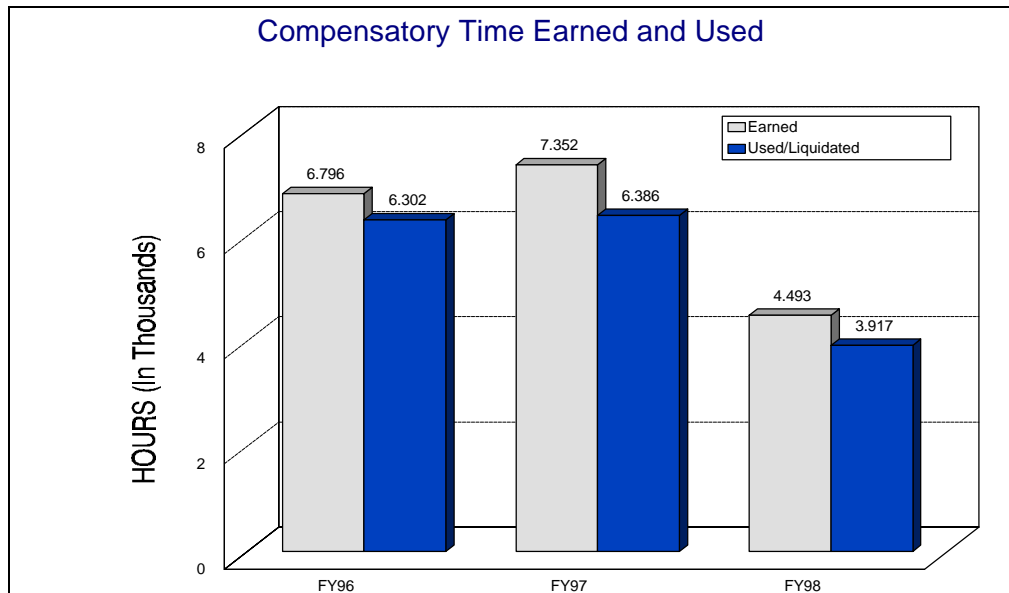
The number of investigations conducted ranged from eight to 91 per investigator. The average caseload was under one investigation per week.

Following the December 15, 1997 reorganization, compensatory time earned was reduced 39% from 7,352 hours in FY97 to 4,493 hours in FY98. Average compensatory time per

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case decreased from approximately six hours before the protocol to 2-1/2 hours after the protocol. Compensatory time liquidated declined to \$833 in FY98 from \$20,106 in FY97.

Investigators earned 4,493 hours of compensatory time in FY98 as compared to 7,325 hours in FY97. In FY96, they earned 6,796 hours of compensatory time. The table shown below summarizes compensatory time earned and used for FY96, FY97, and FY98.



SUPERVISION

OSFM supervisors did not review the reports of the investigators, and none are certified arson investigators. Most other states' fire marshals (85%) and Illinois' fire departments (68%) said their supervisors reviewed investigation reports for compliance, technical accuracy, investigative sufficiency, and completeness. Similarly in most other states and in fire departments throughout Illinois, supervisors were certified fire or arson investigators.

RECOMMENDATIONS

- 1. The Office of the State Fire Marshal (OSFM) should review the priority codes of its protocol to ensure the protocol allows responding to fires promptly.**

Response: This matter has been resolved by assigning arson investigators to serve as duty agents on a rotating basis to speak directly to fire or police departments requesting

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assistance on the agency's arson hotline. The duty agents have the authority to dispatch personnel immediately, 24 hours a day, 7 days a week.

The supervisor has the authority to dispatch investigators anytime necessary, 24 hours a day, 7 days a week. The audit survey found overall satisfaction with the agency 81%; adequacy of investigations 85%; and timeliness of investigations 76%. Dissatisfaction with the agency's handling of arson investigations was only 6%. The only survey question that revealed greater dissatisfaction had to do with the agency's policy and protocols for sending arson investigators.

Findings: The protocol has four codes which specify the OSFM's response priorities for dispatching arson investigators:

- Code 1 -- Fires involving a fatality: stated to receive an immediate or quick response;
- Code 2 -- Injuries;
- Code 3 -- Suspicious fires: stated to receive a response during daylight hours; and
- Code 4 -- Smaller fires, such as car or garage fires: receive a response the next business day. Previously, the written policy was that response to small fires could be delayed until daylight.

In cases sampled by the auditors, OSFM overall response was quicker prior to the establishment of the protocol. Before the protocol, investigators arrived within four hours of the fires sampled in 51% of the cases, as compared to 42% of the cases after the protocol.

The report notes that 54 of 60 cases (90%) after the protocol did not fit the first priority which specifies an immediate response. OSFM officials said if a fire chief insisted, an investigator would be dispatched regardless of the type of fire.

Of 269 fire chiefs surveyed, 209 fire chiefs said the new protocol had no effect on arrests and 203 said the protocol had no effect on prosecutions. Twenty fire chiefs said the protocol decreased arrests and 24 said it decreased prosecutions. Nine fire chiefs claimed increased arrests and five had increased prosecutions.

In calendar year 1998, the number of arrests was lower (89 arrests) than in 1997 (148 arrests) and 1996 (153 arrests). OSFM officials said the reduction was due to more stringent criteria which now requires the investigator to be involved in making the arrest.

- 2. Review the method of assigning cases to reduce the disparity in arson investigators' caseloads to make work responsibilities more equal. Also, all requests for investigators should be documented, including any reasons for not dispatching investigators.**

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Response: The Agency is involved in productive and ongoing labor-management meetings with the arson investigators union and the assignment of cases and geographic boundaries is an issue that will be discussed and resolved. With regard to documenting requests for arson investigators, this is being accomplished as IEMA answers the arson hotline and records and documents all calls. IEMA also connects the caller directly with a duty agent who is an arson investigator who can answer technical questions and has the authority to dispatch the nearest available investigator 24 hours a day, 7 days a week. The mid-level administrators who will be hired to meet the findings and recommendations of the report will be assigned these specific duties, among others, to monitor these areas.

Findings: After the new protocol was established, the number of cases handled by arson investigators declined. Average caseload per investigator was fewer than one per week and overtime declined from 2,452 in 5.5 months to 2,189 in 6.5 months.

OSFM did not keep complete records on when investigators were requested but not dispatched, but there were 27 recorded instances when OSFM did not send an investigator.

After the December 15, 1997 reorganization and protocol, 11 of 18 investigators who worked the full fiscal year conducted fewer investigations, 6 investigators conducted more investigations, and 1 investigator conducted the same number of investigations; the numbers remained the same when canine cases were added.

Investigations conducted by individual investigators after the new protocol ranged from eight to 91 investigations. Prior to the protocol, 14 of 19 investigators' caseloads were within 10 investigations of the average for investigations.

The differences between investigators' caseloads indicates the agency needs to review and improve controls to reduce the disparity in workloads so that all investigators are utilized more equally and efficiently.

3. The OSFM should maintain complete time records. The Agency should:

- 1) Keep records on when overtime requested by investigators was not authorized and the reason for not authorizing overtime.**
- 2) Ensure that investigators' compensatory time records are accurately recorded.**
- 3) Communicate in writing all the time codes that division employees may use, describe when each code should be used, and monitor employees' time charges.**
- 4) Require all arson division employees to keep accurate time records.**

Response: Time records are governed by CMS guidelines and will be adhered to by the agency. All overtime must already be approved in advance by a supervisor, and may also

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be approved by the duty agents who dispatch investigators to fire scenes. The time codes in question have to do with division report forms which are being reviewed and will be modified when labor and management come to agreement which is anticipated in the near future. All employees are required to keep accurate time records. However, administrators will be expected to closely review them for each pay period.

Findings: OSFM arson investigators said they were no longer getting needed overtime approved which affected their investigations although they provided no documentation. OSFM also kept no documentation of when overtime requested by investigators was not authorized by supervisors; such documentation can help agency management determine that overtime necessary for investigations is not being appropriately denied.

OSFM records on 14 arson investigators' compensatory time contained discrepancies such as errors in spreadsheets; in amounts carried over from year to year; and in data entered when the agency switched to the Central Time and Attendance System (also used by some other State agencies) on January 1, 1998. In addition, time records indicated that one investigator who left the agency was paid for 11-1/2 hours more than he was entitled.

During FY98, the time code used by arson investigators were revised more than once. Investigators charged time to codes that were not on the list provided by the OSFM. The lack of complete written guidance may have contributed to some misunderstandings on when the various time codes should have been used.

4) Some investigators' time charged to cases changed significantly. Of the 18 investigators who worked during the entire fiscal year, 11 charged more hours per case after the protocol, including one who charged five times more hours per case. Conversely, three investigators charged approximately half as many hours per case after the protocol. The average number of hours charged per case increased slightly from 16 hours 42 minutes before the protocol to 17 hours 30 minutes after the protocol. Investigators' time charged to training, which was under 80 hours for all investigators before the protocol, exceeded 80 hours for 15 investigators after the protocol. Time charged to training reached as high as 458 hours for one investigator who only had 40 hours before the protocol. Another investigator who had only 12 hours before the protocol charged 260 hours after the protocol.

4. The OSFM should review and update its policies and procedures regarding fire investigation reports and records. In addition, OSFM should implement management controls to ensure that:

- **Reports are prepared for all investigations.**
- **Reports conform with standards established by the agency, such as for completeness, interview information, and physical evidence.**
- **Reports are reviewed by a certified arson investigator who may be a Regional Administrator or a specialist.**

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- All pertinent records of an investigation are in the agency's control.

A checklist could be established which specifies the elements of a complete investigation file.

Response: Reports will be prepared for all cases. Administrators or lead workers will be responsible for reviewing reports for completeness and case preparation. Required records will be maintained in the agency offices.

Findings: Investigators are required to submit a case initiation form which includes the particulars on a fire. None of the 60 cases sampled before the protocol had a Case File Initiation Report in the case file. After the protocol, 23 of 60 cases (38%) did not have a Case Initiation Form; of the 37 cases that had a Case Initiation Form, 16 were not signed.

In some cases determined to be arson, the case file did not show that police were contacted by investigators, even though the standard Fire Investigation Report form had a question on whether police were notified. In addition, investigators are supposed to submit a "Fire Investigation Report" within 10 days after starting the investigation. More than half of the reports were either not prepared, not reviewed, or lacked the level of detail required by the agency.

Approximately 10% of the fire investigation reports sampled did not meet the level of completeness set forth in the arson investigation Operations Manual.

Arson supervisors were not certified by the OSFM as arson or fire investigators. Two-thirds of other states' fire marshals and Illinois fire chiefs stated their supervisors were trained investigators. Prior to the 1995 budget cut and layoffs, arson division supervisors were certified arson investigators, as was the division director. After the December 1997 reorganization, supervisors and the director were not certified arson investigators. The change occurred because of budgetary reasons.

Between 1995 and 1997, the arson division had no formal supervisory position. After the December 1997 reorganization, the supervisors were titled Regional Administrators.

- 5. Evaluate the work performance of arson investigators more objectively to include both negative and positive comments that are applicable, provide feedback on a regular basis including their annual evaluations, document deficiencies, and take action to correct work performance that continues to not meet expectations.**

Response: The addition of the new administrators will provide more frequent and direct contact with the arson investigators. Review of reports, assistance in case investigation in the field for major cases, and participation in continuing education between the administrators and investigators will be achieved in the future. Positive results will be

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noted with regard to personal performance and action will be taken for any investigators not meeting expectations.

Findings: All OSFM investigators received supervisory ratings that were satisfactory or above, and only one was given negative comments in the FY98 performance evaluation. A Department of Central Management Services evaluation form was used, which had a column for self-rating by the employee and a column for rating on the same attributes by the evaluator. In over two-thirds of the questions, all investigators received a satisfactory rating from their evaluator while the remaining one-third were Exceeds Expectations.

In only one case did an investigator give himself a Needs Improvement on one attribute. The evaluation contained unfavorable comments from the evaluator which said OSFM had received written complaints about the employee's conduct at a fire scene; that individual was promoted to an Arson Investigator II after the evaluation.

If performance is not satisfactory, it needs to be communicated to the appropriate investigators and documented in their personnel records.

- 6. Inform all local fire departments of the need to submit data on fires each month as required by the Fire Investigation Act (425 ILCS 25/6); monitor to ensure that complete data is provided in a timely manner.**

Response: The OSFM recently sent a letter to all fire departments reminding them of the statute requiring the submission of fire reports. The vast majority of fire departments have been submitting fire data, yet a small number of mainly rural and volunteer departments have not. The OSFM will continue to work cooperatively with them to increase compliance.

Findings: Local fire departments did not report all fires each month to the Office of the State Fire Marshal as directed by statute. In the auditors' random sample, local fire departments did not report 40% of the fires in the monthly report to the OSFM as required by statute. Nearly 10% of the fire chiefs responding to the auditors' survey said they were either unaware of the reporting requirement, or were unaware that it was a statutory requirement.

The Fire Investigation Act also requires OFSM to keep records on all fires that occur in the state. The OSFM places this information in its Illinois National Fire Incident Reporting System (INFIRS) which is used to submit information to the Federal Emergency Management Agency's (FEMA) National Fire Incident Reporting System.

- 7. Conduct a review to determine if there is a need for continuing education requirements for investigators who want to maintain their fire or arson investigation certification.**

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Response: Professional development and training of arson investigators will be enhanced beyond current rules and regulations require. These will be in concert with national standards (NFPA 921) and professional associations with which the Agency has active participation. Several training courses and professional development activities have been scheduled to begin in the summer of 1999.

Findings: The OSFM sponsors exams to certify individuals to become fire investigators and arson investigators. Becoming a certified arson investigator requires 120 hours of basic training at the University of Illinois Fire Institute, plus 260 hours of advanced training (for a total of 380 hours) at the U or I Police Training Institute in Champaign-Urbana. The 260 hours includes 40 hours of weapons training through the Illinois Law Enforcement Standards Board. To become a certified fire investigator requires just the 120 hours of basic training.

For its investigators, OSFM had established self-study continuing education which involved monthly testing. The tests were administered through the University of Illinois Fire Service Institute but were only given during May, June, July, and September 1998.