

DEVELOPING A FIRE INVESTIGATION POLICY FOR YAKIMA COUNTY

EXECUTIVE DEVELOPMENT

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**An applied research project submitted to the National Fire Academy
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ABSTRACT

The problem was that the Yakima County Fire Protection Bureau, with an average of 1800 fires per year and only two available fire investigators, did not have the resources to investigate all fires. The purpose of this applied research project was to develop a fire investigation policy that would meet the intent of the State law.

The action research method was used to determine answers to three questions. First, what state and local regulations exist relevant to fire investigation responsibilities? Second, how are other Washington counties administering their fire investigation programs? Third, how can Yakima County provide efficient fire investigation services that comply with the legislative mandate?

A survey of other Washington counties was conducted to determine the basic operation of their fire investigation unit. A separate survey was conducted of Yakima area fire chiefs to determine their expectations for fire investigation services from Yakima County. In addition, personal interviews were conducted with Yakima County Corporate Counsel, a representative from the Washington State Association of Fire Marshals, and the chair of the Region 7 Public Safety Association.

A policy was created that addresses call-out criteria and basic safety procedures for fire scene investigation. The policy included guidelines for stand-by resources and delineation of jurisdictional boundaries. Survey results indicated that the majority of counties were establishing response thresholds to meet the intent of the State law.

The recommendations from this research included a) incorporating the proposed policy in the Bureau's policy and procedures manual b) assisting the Washington State

Fire Protection Bureau in collection of fire data, c) partnering with Region 7 Public Safety Association for the delivery of fire investigation training, d) developing an arson prevention public awareness program, and e) conducting further research into the development of an arson investigation task force.

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INTRODUCTION

Yakima County is a rural jurisdiction on the eastern side of Washington State with an area exceeding 4200 square miles and a population of approximately 220,000. Fire suppression services for the unincorporated area of the County are provided by a total of twelve individual fire protection districts. These fire protection districts are comprised largely of volunteers with a small percentage of career staff. The Fire Protection Bureau, which provides all other fire service responsibilities identified in the Uniform Fire Code (UFC), is a division of County government under the Public Works Department and is comprised of four career employees: the fire marshal, one fire and life safety inspector, and two combination fire inspector/investigators.

By state law mandate, counties in Washington are charged with the responsibility of investigating fires outside incorporated city jurisdictions. RCW 48.48.060 states that the responsibility for investigating the origin, cause, circumstances, and extent of loss of all fires shall be assigned to the county fire marshal or other fire official so designated by the county legislative authority within unincorporated areas of a county (Revised Code of Washington, 1996).

The problem is that, with an average of 1800 fires per year and only two available fire investigators, Yakima County does not have the resources to investigate all fires. The purpose of this research is to develop a fire investigation policy that will meet the intent of the Washington State law.

This research project will use the action method of research to develop a policy that outlines standard operating guidelines for fire scene investigation. Answers to three research questions will be determined. First, what state and local regulations exist

relevant to fire investigation responsibilities? Second, how are other Washington counties administering their fire investigation programs? Third, how can Yakima County provide efficient fire investigation services that comply with the legislative mandate?

BACKGROUND AND SIGNIFICANCE

Washington State is separated from west to east by the natural geographical boundary of the Cascade mountain range. The western side of the State is quite industrialized with waterways in the Puget Sound area as well as a number of large corporations. This development has contributed to more densely populated areas with a strong economy and a comfortable tax base. The eastern side of the State is primarily agricultural with a more scattered population, weaker economy, and marginal tax revenues. As a result, government services, specifically fire services, have been much better developed and more effectively provided in Western Washington.

In 1976 the Washington State Legislature mandated that the Uniform Fire Code be adopted and enforced by local jurisdictions within the State of Washington, one of the duties of that Code being fire investigation services. While this did not pose a significant problem to many jurisdictions on the western side of the State, much of the east side did not effectively implement a program for fire investigation services. Our implementation strategy in Yakima County at that time was to delegate fire investigation responsibility to the fire protection districts and the Yakima County Sheriff.

In 1985 the Washington State Legislature enacted additional legislation, RCW 48.48.060, pertaining to fire investigation services. While this legislation impacted city fire departments, there was little effect on delivery of fire investigation services in county organizations (Revised Code of Washington, 1985).

In 1996 the State Legislature revisited the issue of fire investigation and amended RCW 48.48.060 to more specifically delineate fire investigation and associated reporting responsibilities. The upshot of this legislation was that, in an incorporated city, the Chief of the fire department was responsible for fire investigation. In the unincorporated areas, the County Fire Marshal or designated fire official was responsible. With the onset of this legislation, the fire protection districts in Yakima County began discussions with the Board of County Commissioners, which ultimately resulted in the transfer of fire investigation responsibility to the County (Revised Code of Washington, 1996).

While it was the expectation of the County that obvious fire origin and cause would continue to be established by the fire protection districts, there has been no standard operating guidelines established. Requests for county fire investigators range from nonexistent to being called out for every fire, depending on the fire protection district. Responsibility for delineation of jurisdictional boundaries, establishment of scene safety and control, and provisions for stand-by resources were not addressed.

This applied research project was conducted as a course requirement for the *Executive Development* class at the National Fire Academy (NFA). The project relates to the course content in several ways. The research project attempts to identify some of the conditions and factors affecting the organizational culture of the countywide fire service, using some of the principles presented in the Organizational Culture module of the course. Unit 11 discussed legal issues relevant to jurisdictional responsibility. The lectures and presentations discussed general fire service policies and procedures to help minimize liability (NFA, 2001). The need to address the legal obligations of Yakima

County as well as the author's interest in enhancing the interaction within the fire service community became the basis for this applied research project.

LITERATURE REVIEW

Question 1

Historically the organizations involved in fire investigation were either private-sector organizations or public agencies, those required by law to investigate fires at the local, state and federal levels. In a discussion of organization for fire investigation, the National Fire Protection Association (NFPA) *Fire Protection Handbook* states, "In the public sector, most initial investigations are carried out by the fire department personnel responding to the scene. If the cause is easily determined and does not appear to be of a potentially criminal nature, the investigation will end at that level. When the cause cannot be determined, a fatality is involved, or arson is suspected, additional help is generally dispatched. In a small fire department, the local police or the county or state fire marshal's office may come from the county or state police" (Custer, 1977).

In Washington State, fire investigators were initially available through the State Fire Marshal's Office upon request of local jurisdictions. Despite delays in response time and limited staffing, most rural counties relied primarily on this service. This level of investigation was typical and widely accepted. The Federal Emergency Management (FEMA) publication *Rural Arson Control* discusses the utilization of state agencies for rural fire investigation and notes that most states have never been adequately staffed to provide timely assistance. The number of cases, the geographical area covered, and the staff shortages lead to an increasing inability to effectively manage caseloads (International Association of Fire Chiefs, 1989).

In the mid 1990's budget constraints began to impact all agencies in Washington State government and the Fire Marshal's Office was forced to reduce expenditures. As a result the Fire Protection Policy Board, the overseers of the State Fire Marshal's Office, reviewed measures to reduce program costs. After considerable debate, the decision was made to remove the fire investigation program from state fire marshal services in 1992 (Fire Protection Policy Board, 1992).

Section 1 of the Revised Code of Washington 48.48.060 contained a section regulating fire investigations that stated the following:

- (1) The chief of each organized fire department, the sheriff or other designated county official, and the designated city or town official shall investigate the cause and origin, and document extent of damage of all fires occurring within their respective jurisdictions, as determined by this subsection, and shall forthwith notify the chief of the Washington state patrol, through the director of fire protection, of all fires of criminal, suspected, or undetermined cause occurring within their respective jurisdictions. The county fire marshal shall also be notified of and investigate all such fires occurring in unincorporated areas of the county. Fire departments shall have the responsibility imposed by this subsection for areas within their jurisdictions. Sheriffs or other designated county officials shall have responsibility imposed by this subsection. For the purposes of this subsection, county officials shall be designated by the county legislative authority, and city or town officials shall be designated by the appropriate city or town legislative or executive authority. In addition to the responsibility imposed by this subsection, any sheriff or chief of police may assist in the investigation of the

cause and origin, and document extent of damage of all fires occurring within his or her respective jurisdiction.

- (2) The chief of the Washington state patrol, through the director of fire protection or his or her deputy, may investigate any fire for the purpose of determining its cause, origin, and the extent of the loss. The chief of the Washington state patrol, through the director of fire protection or his or her deputy, shall assist in the investigation of those fires of criminal, suspected, or undetermined cause when requested by the reporting agency. In the investigation of any fire of criminal, suspected, or undetermined cause, the chief of the Washington state patrol and the director of fire protection or his or her deputy, are vested with police powers to enforce the laws of this state. To exercise these powers, authorized deputies must receive prior written authorization from the chief of the Washington state patrol, through the director of fire protection, and shall have completed a course of training prescribed by the Washington state criminal justice training commission (Revised Code of Washington, 1981).

Effective July 1, 1996, Section 1 of the Revised Code of Washington 48.48.060 was amended to read as follows:

- (1) The responsibility for investigating the origin, cause, circumstances, and extent of loss of all fires shall be assigned as follows:
- (a) Within any city or town, the chief of the fire department:
 - (b) Within unincorporated areas of a county, the county fire marshal, or other fire official so designated by the county legislative authority.

- (2) No fire marshal, or other person, may enter the scene of an emergency until permitted by the officer in charge of the emergency incident.
- (3) Nothing shall prevent any city, town, county, or fire protection district, or any combination thereof, from entering into interlocal agreements to meet the responsibility required by this section.
- (4) When any fire investigation indicates that the cause of the fire is determined to be suspicious or criminal in nature, the person responsible for the fire investigation shall immediately report the results of said investigation to the local law enforcement agency and the chief of the Washington state patrol, through the state fire marshal.
- (5) In addition to the responsibility imposed by this section, any law enforcement agency, sheriff, or chief of police may assist in the investigation to the origin, cause, circumstances, and extent of loss of all fires within his or her respective jurisdiction.
- (6) The chief of the Washington state patrol, through the director of fire protection or his or her deputy, may investigate any fire for the purpose of determining its cause, origin, and the extent of the loss. The chief of the Washington state patrol, through the director of fire protection or his or her deputy, shall assist in the investigation of those fires of criminal, suspected, or undetermined cause when requested by the reporting agency. In the investigation of any fire of criminal, suspected, or undetermined cause, the chief of the Washington state patrol and the director of fire protection or his or her deputy, are vested with police powers to enforce the laws of this state. To exercise these powers, authorized deputies must

receive prior written authorization from the chief of the Washington state patrol, through the director of fire protection, and shall have completed a course of training prescribed by the Washington State criminal justice training commission (Revised Code of Washington, 1996).

Instituted in January 1, 1998, Yakima County Code 13.09.060 (2) through the adoption of Ordinance 1998-2 states in part the following:

“RCW 19.27.110 provides that adoption of the Uniform Fire Code is not intended to grant counties any more authority to suppress or extinguish fires than that which is currently possessed. In addition, the suppression, extinguishment, and investigation of hazardous or dangerous fires, within the unincorporated areas of Yakima County has traditionally been, and currently is, performed by local fire protection districts acting under independent authority of law. It is, therefore, the declared intent of Yakima County that its functions and duties in administering and enforcing the provisions of the Uniform Fire Code, 1997 Edition, do not include responsibility of the suppression and extinguishment of dangerous or hazardous fires. Consistent with this intent, the County and its personnel are not responsible for performance of the functions and duties specified under the following sections of the Uniform Fire Code, 1997 Edition, Section 103.2.1.1, Item 2, 104.2; and 104.3.

In addition, the following sections pertaining to the investigation of fires are permissive and not mandatory as to the County and its personnel; Sections 103.2.1.1, Item 8. This section shall not be construed as prohibiting the investigation of fires by the County or its personnel to determine if there has been a violation of this Chapter or any enforcement action subsequently taken thereon” (Yakima County Code, 1998).

Question 2

The 39 counties in Washington State are widely diverse with areas ranging from 264 square miles to 5,268 square miles and populations ranging from 2,342 to 1,741,785. Some contain jurisdictions with large metropolitan fire departments while others have fire departments with no paid staff. Some of them have no designated Fire Marshal while others have designated the County Sheriff, Planning Director, or other county official as the Fire Marshal. Still others contract with a fire protection district for all county fire services. Policies and procedures for administering the fire investigation programs vary as well.

The Pierce County Fire Marshal's Office has in place call-out criteria which address the general guidelines for requesting a fire investigator response. The criteria provide that an investigator will be called in the event of death or serious injury, recognized arson fires, significant fires in commercial and residential occupancies, fire related to illegal activity or hazardous materials, and fires of undetermined cause. This criteria further state that an investigator will be called to vehicle fires when requested by law enforcement, fires involving multiple vehicles, and when an insured vehicle with a loss of \$20,000 or more and considered arson or undetermined (Pierce, 1999).

The policy for dispatching of fire investigators in the Kitsap County Fire Marshal's Office specifies that an on-duty investigator will respond to the fire scene when a member of the fire department determines that the assistance of the county fire investigator is needed. The Fire Marshal's Office is responsible to notify the County Sheriff when an investigation is requested (Kitsap, 2000).

In Clark County, the Fire Marshal's Office responds to large loss fires, loss of life, significant injury, arson, incendiary devices or explosives, unknown causes, major code violations, county owned property or whenever the district cannot determine the cause. Investigators are automatically dispatched to "working" fires as determined in their protocol (D. Lynam, personal communication, December 16, 2002).

The Fire Marshal's Office in Whatcom County has a shared program with law enforcement in which they investigate all fires of unknown origin and any fire with a value of \$10,000 or more (W. Webb, personal communication, September 10, 2002).

Cowlitz County satisfies the requirement to investigate all fires by having the local fire protection district forward copies of their reports. The County responds when the officer in charge of the scene cannot make a definite determination (S. McKee, personal communication, January 19, 2002).

According to Fire Marshal Ken Williams, the Sheriff in Benton County conducts the bulk of the investigations. Accidental fires that are less than \$10,000 are investigated by the Fire Districts. If the fire involves a fatality, is thought to be suspicious or arson is suspected, the Sheriff is then requested (K. Williams, personal communication, December 17, 2002).

Question 3

Robert Carter, former Chief Fire and Arson Investigation Specialist, NFPA, discusses the roles and responsibilities of personnel from various agencies to accomplish effective fire and arson investigations. Carter (1979) begins his remarks recognizing that successful fire and arson investigation is especially difficult in rural areas, "In rural areas, where fire protection is provided almost entirely by volunteer or on-call departments, the

investigation of fires is an acute problem” (p. 268). He suggests a number of scenarios which include the involvement of various combinations of fire suppression personnel, the county fire marshal, the local law enforcement agency, and state investigators. In all of the suggested alternatives, Carter presumes that the responding fire suppression department “bears the responsibility for determining that a fire is suspicious” (p. 269). The author notes that the key to the success of the systems described is based on cooperation and understanding of the agencies and its members. To ensure such cooperation and understanding, he recommends that roles and responsibilities be identified in written rules and regulations.

The FEMA publication *Arson Control Guide for Volunteer Fire Departments* notes that the volunteer firefighter has the responsibility to assist in determining whether a fire was deliberately or accidentally caused (Weisman, Lynch, and Goodrich, 1981). The text states, “The volunteer firefighter plays a strategic role in arson detection and investigation. First-in firefighters are the investigator’s best source of information concerning the initial circumstances at the fire scene, the fire’s exact location, its spread and intensity. Firefighters who have received training in fire detection procedures especially can provide a useful service, because they know what details are important in the determination of fire cause” (p. 25). This publication further notes that a designated fire official on the scene should make a preliminary determination of the cause of the fire once it is extinguished or contained. “If the fire appears to be of an incendiary nature, suspicious origin, or indeterminable cause, the responding unit notifies the fire marshal, law enforcement agency or the state bureau of investigation to conduct a more detailed investigation” (p.4).

Determination of a suspicious fire and subsequent criminal investigation should be a cooperative effort between the responding agencies. In theory, successful efforts identifying a suspect should lead to criminal prosecution. Henson (1995) states “Although it is not the only effective means, strong arson prosecution is a powerful deterrent to the crime of arson within a community” (p. 2). He goes on to discuss the lack of successful prosecution of arson cases in the United States. Henson notes reluctance on the part of prosecutors to accept circumstantial evidence as a primary reason. Beering (1995) notes the number of shortcomings in scene investigation and documentation, the poor relationship between fire departments and law enforcement, and the fact that prosecutors have too many higher priority cases as causes for lack of prosecution. He also identifies circumstantial evidence as the number one reason why prosecutors reject arson cases. Beering goes on to say that there are steps that can be taken to improve the odds that a case will be prosecuted. “Training for firefighters and fire commanders must include basic arson recognition. The best witnesses in an arson case are the first-arriving firefighters. With proper training, they will recognize more and provide valuable evidence about the fire”(p. 44).

Long ago the Massachusetts Arson Action Group (The Group, 1977) would recognize the need for additional training for fire investigators and the inability for individual agencies to effectively provide the level necessary. The report of this committee endorses the concept of the arson task force. “Local level investigations can be significantly enhanced by training and through the creation of arson squads comprised of representatives of the police and fire services. Possible consideration, because of manpower shortages and financial constraints, is warranted by the concept of regional

arson squads in rural areas. Arson squads provide a means of developing the full-time expertise required to identify incendiary fires, and to preserve evidence and gather factual data, essential to successful prosecutions” (p. 26-27).

This document further discusses the need for interagency cooperation for achieving successful arson investigation programs. As a means of increasing the efficiency and quality of investigations, the Arson Action Group recommends that a standard operating procedure be established and published. This published procedure should be distributed to all appropriate agencies to ensure that all investigatory personnel are aware of their roles and responsibilities.

Henson (1995) recognizes that successful arson investigation and prosecution strains the resources of a single organization. The author notes that it is a time consuming process and consequently endorses the value of the task force concept. “ The utilization of a cooperative approach, such as an arson task force, which takes full advantage of the resources, strengths and skills of a diversity of agencies, appears to offer the best solution” (p. 10).

In 1995, the Washington State Patrol, in their role as the State Fire Marshal’s Office, divided the state into a number of service regions and allocated monies to assist in regional delivery of fire training, investigation, and life safety services. Yakima County, along with Kittitas and Klickitat Counties, is part of Region Seven. The fire chiefs and fire marshals of the Region formed a Public Safety Association and as part of that association, formed the Region Seven Fire Investigation Task Force. The Region Seven Fire Investigation Task Force was set up “To provide delivery of prompt professional and effective fire investigation in all areas of Region Seven” (Region 7, 1995).

Former Sheriff Doug Blair, Yakima County Sheriff's Office, issued a memorandum describing law enforcement response to suspicious fires. Sheriff Blair discussed the interaction between representatives of the fire protection districts, the county fire marshal's office, and the sheriff's office. He noted that determination of fire cause and origin would essentially be performed by representatives of the individual fire protection districts. The county fire investigator would be summoned when cause could not be determined, the fire was suspicious, or a fatality had occurred. Yakima County Sheriff's Office would coordinate a criminal investigation when a fire was determined to be suspicious or criminal (D. Blair, personal communication, April 23, 1996).

This research identifying the various roles and responsibilities of agencies involved in a successful fire investigation was evaluated to determine the assignment or responsibility and to delineate the procedures included in the written policy. The concept of interagency cooperation and legislative mandate were also incorporated. The analysis of procedures in other Washington counties was used to establish a reasonable standard.

PROCEDURES

Definitions

Fire Department An organization which provides fire suppression and emergency medical services.

Fire Protection District An organization which provides fire suppression and emergency medical services for unincorporated areas of the county.

Unfunded Mandate Legislation created at the state level to be enforced by local government with no funding source allocated.

Interlocal Agreement A written agreement between two or more governmental

agencies whereby the parties provide defined services in exchange for payment or services.

Assumptions and Limitations

It was assumed that the FEMA publications *Arson Control Guide for Volunteer Organizations* and *Rural Arson Control* provided timely references. Despite the date of these publications, the information was the most extensive available and described contemporary operations of rural fire departments. References to “rural fire departments” were assumed to include fire protection districts. Statistics related to fire occurrence were assumed to be those incidents identified by type code in the National Fire Incident Reporting System which include structure, vehicle, and natural vegetation fires.

Limitations on this research project included the requirement that the research be completed within the six months time period allowed by the NFA Applied Research Project Guidelines. The diversity of the counties’ organizational structure and fire investigation procedures made it difficult to produce valid comparisons.

Research Methodology

The literature reviewed for this project was initiated at the National Fire Academy Learning Resource Center. An additional literature review was conducted on the Internet, using search engines, to access Washington State laws and administrative codes as well as local codes and ordinances. Other reference materials included personal textbooks, professional publications, reports, and periodicals. Surveys and personal interviews were also conducted.

Question 1

A personal interview was conducted with Fire Marshal Wayne Wienholz, Pierce County Fire Marshal. Fire Marshal Wienholz participated on the panel reviewing the proposed changes to RCW 48.48.060. The questions that were posed included: 1) What was the purpose of the new legislation? 2) Was it intended that every fire would be investigated by the county fire marshal?

A personal interview was also conducted with Attorney Martin Muench. Mr. Muench serves as Corporate Counsel for Yakima County. Mr. Muench was first provided with a copy of the legislation. After discussion of the limitations of Yakima County's fire investigation resources, specifically the fact that we have funding for only two fire investigators, the following questions were addressed: 1) Is Yakima County required to respond to every fire? 2) How does the assignment of fire investigation as an unfunded mandate affect the County's obligation? 3) Would a written policy establishing our investigation guidelines reduce our liability?

Question 2

A survey was distributed to 34 of the 35 county fire marshals identified in the 2002 Fire Service Directory, omitting Yakima County. A copy of the County Fire Marshals' survey is provided in Appendix A.

Question 3

A personal interview was conducted with Chief Jerry Davis, Chair of the Region 7 Public Safety Association. As Chair of this association, Chief Davis oversees the operating procedures of the Fire Investigation Council. The following issues were discussed: 1) What role should the County Fire Marshal's Office play in the Fire

Investigation Council? 2) To what extent can a partnership be developed between the fire protection districts, Yakima Sheriff's Office, and the County Fire Marshal? 3) In your opinion, would a written fire investigation policy promote better overall results?

A survey was distributed to each of the fire chiefs in Yakima. This distribution included 14 incorporated cities, 12 fire protection districts, and the Yakima Training Center military facility. A copy of the Yakima Fire Chiefs' survey is provided in Appendix B.

RESULTS

A sample policy describing the standard operating guidelines for a fire scene investigation is shown in Appendix C.

Question 1

Washington State regulations pertaining to fire investigation responsibility are addressed primarily in RCW 48.48.060. Application of this statute occurred in concert with the initial adoption of the Uniform Fire Code. The UFC language was too vague in that it only required the fire department to enforce the ordinances of the local jurisdiction pertaining to the investigation of the cause, origin and circumstances of fire (UFC, 1976). By enforcing to the local ordinances, investigation services throughout the State were inconsistent, if provided at all.

As the original language in RCW 48.48.060 was being enacted, representatives of the Yakima Fire Chiefs' Association, the Yakima County Sheriff's Office, the County Fire Marshal, and the Board of County Commissioners entered into discussions regarding the availability of resources and the ability of each agency to participate in fire investigations. The language in YCC 13.09.060 (2) was the result of those discussions.

The consensus of the participants was that the county fire marshal would have the ability to investigate fires but that authority would be permissive rather than mandatory. The fire protection districts would continue to perform initial fire cause determination. Should the fire be incendiary or suspicious, the Sheriff's Office would then respond. This relationship was acceptable to the participants at that time and no written policy or procedures were developed.

While Yakima County had established an acceptable fire investigation process locally, this was not the case in a number of counties in Washington State. The initial enactment of RCW 48.48.060 did accomplish the goal of more consistent investigations in the city fire departments, but jurisdictional responsibility and authority were not clear in unincorporated areas of counties. According to Wayne Wienholz, Washington Association of County Fire Marshals' representative to the legislature, the amended language to this current statute was designed to make certain that the proper authorities were called when they should be. Mr. Wienholz notes that the main focus of the law was to clearly delineate who had the responsibility to conduct fire investigations. The wording "all" was included to make certain the proper authorities were called when they should be. "It can be read that we should respond to 'all' fires that occur, no matter of what consequence. However, that was not the overriding reason for the language" (W. Wienholz, personal communication, January 16, 2003).

When asked if Yakima County is required to respond to every fire, Attorney Martin Muench stated that we are obligated to provide the best level of service with the resources available. When asked how the unfunded mandate affects the County's obligation, he explained that mandating legislation with no funding source often results in

the inability for local government to comply with the exact language of a law. Because the mandate originates at the State level and with no funding provided, any liability for nonperformance should ultimately revert to the State. Mr. Muench noted that a written policy establishing the guidelines for response to fire investigations would be appropriate (M. Muench, personal communication, January 16, 2003).

Currently the requirement of the legislation for reporting fire data to the State Fire Marshal's Office has not been accomplished. Despite the mandate in RCW 48.48.065 requiring statistical information and fire data to be reported, approximately 38% of departments in Yakima County reported incident information to the Office of the State Fire Marshal in 2001. This is consistent with data reporting throughout the State. "In 2001, 208 of the 544 fire departments in the state reported emergency response data to the Office of the State Fire Marshal. This data reflects the 29,996 fires fire departments responded to, resulting in \$129,810,964 in property loss" (Corso, 2001).

Question 2

Of the 39 counties in Washington State, four have no identified Fire Marshal's Office or Fire Prevention Bureau. All of the four are located on the eastern side of the State. Twenty-two of the county fire marshals, twenty from the East side, are either part-time employees or serve in a dual capacity position such as Building Official, County Sheriff, or Director of Emergency Management. Based on these limitations, the total of 13 responses is considered acceptable. The responses have been compiled distinguishing the East side of the State from the West side. An analysis of the data revealed the following:

- Thirteen responses were received: four East side, nine West side.

- Fire investigators from the County Fire Marshal's Office responded to an average of 22% of the total fires annually: 19% East side, 25% West side.
- All East side departments employ only one fire investigator. Four of the West side departments employ one investigator, three departments employ three investigators, and two departments employ four investigators.
- All East side positions are combination fire investigator/fire inspector. Positions for all except one West side department are combination fire investigator/fire inspector.
- No departments contract with fire protection districts for fire investigation services.
- All departments receive funding for fire investigations from the county general fund.
- Four departments will remain on the scene without the assistance of the fire protection district: Two East side, Two West side.
- Five departments participate in a fire/arson investigation task force: One East side, Four West side.

Question 3

When asked of the role of the County Fire Marshal's office in the Region 7 Fire Investigation Task Force, Chief Jerry Davis indicated that Yakima County should take a leadership position in organizing training and promoting the interaction of the participating departments. When asked to what extent a partnership can be developed, Chief Davis responded that the County Fire Marshal's Office could best serve as the liaison between the fire protection districts and the Yakima County Sheriff's Office. He noted that representatives of the Fire Marshal's Office have established relationships with both agencies and can assist in the coordination of investigation procedures requiring law enforcement response. Chief Davis stated that he believes a written investigation policy is essential to establishing an effective use of the resources available in Yakima County. He stated further that identifying the roles and responsibilities would establish better

overall relationships among the agencies involved (Davis, personal correspondence, January 21, 2003).

Ten of the 27 surveys were returned. Five of the jurisdictions are combination city/county departments, reducing the total requested responses to 22. The number of surveys returned is consistent with the active jurisdictional members of the Yakima Fire Chiefs' Association. Responses to survey questions revealed the following results.

Numbers in parenthesis indicate duplicate answers.

- How many career fire fighters are on your department?
 - 70
 - 17
 - 15
 - 14
 - 6
 - 4 (2)
 - 0 (3)

- How many volunteer fire fighters are on your department?
 - 230
 - 82
 - 48
 - 26
 - 25
 - 21
 - 20
 - 0 (3)

- Do you conduct fire investigations?
 - No
 - Origin and cause only (5)
 - Assist in criminal investigations (4)

- How many trained investigators do you have on your department?
 - 7
 - 6
 - 5
 - 3 (2)
 - 2
 - 1 (2)
 - 0 (2)

- Do your fire investigators have additional duties?
N/A
No
Investigator/Inspector
Investigator/Fire fighter (8)
Investigator/Other
- Would you be interested in pursuing a fire investigation task force?
Yes (6)
No (2)
Undecided (2)
- When should a Yakima County fire investigator be requested?
Origin and cause cannot be determined (2)
All above (7)
All fires

Commenting on past practices regarding roles, responsibilities, and resource limitations, current Yakima County Sheriff, Ken Irwin, related that he currently has two deputies trained in fire investigation. His description of the interaction of the Yakima County Sheriff's Office (YCSO) with Fire Marshal's Office is that YCSO will respond to the fire scene and take a report if a fire is determined to be suspicious or criminal in nature. When the fire investigator recovers evidence, an on-duty deputy will respond, receive the evidence, and store it. A Sheriff's Office detective will then proceed with the criminal investigation. Sheriff Irwin expressed a desire for increased cooperation between the County Fire Marshal's Office and his department (K. Irwin, personal correspondence, December 21, 2001).

DISCUSSION

The policy, which represents the results of this research, addresses actions to be taken relating to fire scene investigation. The policy is intended to provide direction regarding the response of Yakima County Fire Investigators. The policy is broad in

nature and intended to serve as a guideline for call-out criteria and basic safety procedures. It is important to note that this policy is designed to provide the best available investigation service with the resources available.

County fire services in Washington State differ from the traditional fire department concept in that fire suppression and emergency response operations are delivered by a number of fire protection districts within each county. Duties such as fire inspection, public fire education, and fire investigation services are provided through the centralized county government. While most counties have developed a Fire Marshal's Office, these agencies are generally a division of a non-fire-related department such as Planning, Public Works, or Community Development.

Through the years this has posed a significant challenge in that county decision-makers are not familiar with the unique expectations related to delivery of fire investigation services. The expectation that investigators will be available 24 hours a day, seven days per week, that they will be provided with and trained in the use of self-contained breathing apparatus, and possibly commissioned officers carrying fire arms is a foreign concept to the customary parent department. Training in fire scene safety, incident command, and hazardous materials response are not included in the overall scheme of organizational objectives. Despite these issues, the County Fire Marshal's Office is the agency responsible for providing fire investigation services in unincorporated areas of Washington State.

James C. Robertson (1979), former Maryland State Fire Marshal, recognizes the diversity of tasks assigned to the fire marshal and the expectation of what is to be accomplished. "The term fire marshal connotes the marshaling of forces to overcome

fire—the exact job performed by an individual who marshals forces to conduct inspections, to educate the public in fire-related matters, to assure the safety of buildings constructed, and to bring to justice those responsible for setting fires” (p. 173). It is indeed true that all of these responsibilities fall under the jurisdiction of the county fire marshal. Unfortunately, the funding for delivery of these programs is not delineated as specifically as the assignment of duties.

Revenues for the Yakima County Permit Services Division are generated entirely from permit fees collected and maintained in an enterprise fund. No additional revenues are supplemented from the general fund budget of the County. The Fire Protection Bureau is funded as a portion of the Permit Services budget. Currently there are no revenues generated from fire investigation services. This problem is not unique to Yakima County. Aurnhammer (1991) states “ The importance of fire investigation has been established, however, funding of a program of this type is becoming increasingly difficult in light of other priorities that need to be accomplished by the fire service” (p. 2). He notes that the question of how jurisdictions can continue to investigate fires and battle arson without increasing the department’s budget must be addressed. Aurnhammer believes that the use of outside funding and/or resources helps provide a successful approach to managing a fire investigation program.

Based on the data in the County Fire Marshals’ survey, it appears that funding for fire investigation programs is primarily dependent on the general fund of the County. As current tax reform efforts reduce overall government revenues, funding for these programs is impacted as well. Staffing levels ranging from one to four employees,

serving as combination positions, demonstrate the budget constraints driving the ability of the County Fire Marshal's office to provide effective fire investigation services.

The functioning of the more rural East side departments is much the same as the West side of the State. The primary distinction is in the number of counties that have no full-time fire marshal operations.

In the opinion of Attorney Martin Muench, local government cannot meet the specific language of the state mandate without an associated funding source. In view of this, it would be appropriate to identify the most critical circumstances and delineate the means by which a county investigator will be expected to respond to a fire scene. The fact that no other county surveyed is able to respond to every fire indicates that thresholds need to be established in which the most efficient use of resources will be allocated in order to best serve the needs of our communities.

An overriding theme throughout the research is that the need for service pertains primarily to arson investigation. The literature review itself required searches under titles of "arson," "arson investigation" or "arson task force" to obtain much of the pertinent information. "Fire investigation" as a topic does not seem to warrant significant attention.

The perception of the local fire service is consistent with this theme. There remains an expectation that county fire investigators should be trained and available from determination of origin and cause through the entire process of criminal prosecution. Contrary to this expectation, waning resources are leading county managers to look more closely at providing only the minimum legislative requirements. The language of the Washington State law mandates that the county fire marshal is to investigate fires to

determine origin, cause, circumstances, and extent of loss. Once the investigation indicates that the fire is suspicious or criminal in nature, the law enforcement agency is to be contacted (Revised Code of Washington, 1996). The intent of the proposed policy is to work closely with law enforcement to provide the best combination of available resources.

Accurate reporting of fire causes remains critical to our local fire prevention efforts. A comment from *America Burning* states, “Because many volunteer departments keep scanty records or no records at all, the seriousness of the fire problem outside of metropolitan areas is difficult to gauge” (p. 93). The wisdom of this landmark document holds true today. The lack of valid data remains a problem, witnessed by the fact that only 38% of fire agencies in Washington State are currently reporting (Gannie, Usher, Aust, and Foster, 2001). Within Yakima County, that percentage is consistent with fire data provided statewide. Anecdotally we recognize recurring fire scenarios, but, because we have no hard data, it is difficult to properly identify our fire problem or obtain funding to pursue public education programs and intervention training.

The data that could be provided from fire investigations has a number of applications within Yakima County, and specifically with the various programs included in our Fire Protection Bureau. Wolfson (1995) discusses the use of a systematic approach to identify building construction features, electrical service, heating systems, and utility sources and how they may contribute to fire cause. Reporting these results allows fire officials to recognize common deficiencies. Documentation of the success or failure of fire protection systems is critical to future code development activities. Wolfson further relates the impacts of delayed access to the building by firefighters and the need to

analyze the result of that time delay. As noted in the NFPA *Fire Protection Handbook*, “Understanding the fire cause and origin can lead to targeted inspection, public education programs, or, perhaps, proposed code changes” (Custer, 1997, p. 11-3). The FEMA publication *Rural Arson Control* also supports the significance of being able to analyze data collected and reported as a result of investigation efforts. “Many progressive departments recognize the importance of cause determination to arson control, fire prevention, and public education” (p. 2). Koehler (1993) relates the need for analysis of problems using fire-cause data in order to target fire prevention activities to specific problems. The degree to which this data can be used to effectively target programs is proportionate to the completeness and accuracy of the data provided.

Training is a key element in the successful delivery of the fire investigation program. If investigators are to be capable and confident, a level of expertise initiated by proper training is imperative. FEMA’s *Rural Arson Control* discusses the need for training in rural departments ranging from basic arson detection for fire suppression personnel to specialized investigation techniques for selected individuals in the fire department. “Fire officers of rural departments would be more motivated to contribute to arson control if they were given training and some basic reference materials” (p. 3). The text discusses the fact that fire officers may be hesitant to judge the cause of a fire due to lack of training or experience in fire investigations.

The Region 7 Fire Investigation Council receives funding from the State to deliver training and purchase investigation equipment. Two primary training objectives of the council state, “Increase number of investigators through beginning investigation training” and “Enhance skills of investigators through advanced and ongoing training”

Region 7, 2002). Participating in this organization, partnering in their training efforts, and educating members in the purpose and content of our investigation guidelines will enhance our overall ability to deliver efficient fire investigation services throughout Yakima County.

The concern for lack of arson prosecution is not a challenge easily solved. Despite the fact that NFPA estimates some 72,000 incendiary and suspicious structure fires in the United States resulted in the loss of 370 lives and \$1.28 billion in property loss in 1999, the cost of prosecution to local jurisdictions overwhelms their ability to pursue these cases. According to Comeau (2001) “By combining NFPA’s analysis of fire causes with a series of special studies undertaken by the U.S. Department of Justice (DoJ), it’s possible to estimate that only 2 percent of intentionally set fires lead to convictions. DoJ studies also suggest that most of those convicted of arson are sentenced to less than two years in jail and that about a third of those convicted receive no jail time at all” (p. 7). Arson, as a crime, when contrasted to criminal cases of homicide, rape, assault, and drug-related activities, is not considered a high priority. DeHaan (2002) states “Fire is just as much a weapon as a gun, a knife, or an axe.” Convincing prosecutors of this belief is the first step in raising the priority of these cases. DeHaan further notes that effective fire investigations which result in accurate determination of cause are critical to minimizing fire losses. “Incendiary fires can be minimized by recognizing them, identifying those responsible, and prosecuting them” (p. 3).

Analysis of the local survey results revealed that many of the Yakima Fire Chiefs were supportive of the arson task force concept. This approach is one that has been successful in varying degrees for a number of years. As noted in *Rural Arson Control*,

“The arson task force concept remains one of the best mechanisms to overcome inter-agency communication barriers. Similar but less formal organizational approaches have produced improved inter-agency cooperation and coordination” (p. 11). Comeau (2001) describes the degree of coordination required to create an arson task force and the various governmental agencies who must work cooperatively. He relates the need to gain the support of both the law enforcement and fire service communities in order to consider the implementation of a task force. He also notes that gaining the support of government attorneys requires the use of valid statistics. In developing protocols Comeau states that program developers recognize the need for a more aggressive investigative approach in the suppression stage of a fire to allow the task force to gather worthwhile information. While much has been written about the interagency cooperation, organizational structures and operations of the arson task force, there remains much to consider with regard to authority outside jurisdictional boundaries, overtime compensation, and insurance issues.

Yakima County is experiencing some success through recent participation in an arson prevention task force. In partnership with Kittitas County and the Department of Natural Resources, this task force focuses on an arson intervention plan that includes public awareness and the availability of an arson hotline. Wilson and Hart (2001) note that the primary objective of the task force is to design and implement an arson intervention plan to increase public awareness of the arson problem as well as generate leads for ongoing investigations. Utilizing the media to raise arson awareness and publicize steps the public can take to reduce arson, enlisting public support to help stop the arson problem, and encouraging people to call a national arson hotline number with information regarding the identity of a suspected arsonist provide effective prevention

measures. The initiation of the task force concept with the focus on prevention efforts is an efficient use of available resources, recognizing that there is no need to investigate a fire that has been prevented. Committing resources to arson prevention efforts is less complex than participation in arson investigation efforts in that staff and equipment are not responding to potentially hazardous scenes and the benefits of increasing public awareness extend across jurisdictional boundaries.

RECOMMENDATIONS

The Yakima County Fire Protection Bureau should adopt the policy identified as Standard Operating Guidelines for Fire Scene Investigation as shown in Appendix C. Training on the content and use of the policy should be provided to all Bureau staff. A summary of the survey results should be provided and discussed. The training should highlight the objective of the policy to meet the requirements of the law with the resources available.

A formal program describing the policy as well as the research and justification for its development and implementation should be presented to the Yakima Fire Chiefs' and Fire Commissioners' Associations. This presentation should include a discussion of the need for training and data collection discussed in this research. It should also address the concern for minimal arson prosecution and that relationship to response criteria identified in the policy.

Copies of the policy and an itemized explanation of procedures should be presented to company officers for each individual fire protection district. Copies of the policy should also be distributed to dispatching agencies with a memorandum identifying specific changes in procedure.

The Yakima County Fire Protection Bureau should further assist the State Fire Protection Bureau in its efforts to gain 100 percent reporting to the National Fire Incident Reporting System. Yakima County can help accomplish this task by educating local chiefs on the value of reporting this data and, when available, by inputting actual report data into the system.

Efforts for the delivery of ongoing training for fire investigators should also continue. Through the resources of the fire investigation and life safety councils of the Region 7 Public Safety Association, Yakima County can partner in training programs for the development of new investigators as well as advancing the skills of current investigators.

Yakima County Fire Protection Bureau should also develop an arson prevention program that could be delivered throughout the year to local citizens. Successful delivery of the arson prevention message could ultimately result in the need for fewer resources in fire investigation services while providing increased overall fire protection to the community.

Further research is needed to evaluate the feasibility of expanding services through interlocal agreements and the development and implementation of an arson investigation task force.

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APPENDIX A**COUNTY FIRE MARSHALS of WASHINGTON STATE
FIRE INVESTIGATION SURVEY**

Name:

Title:

Organization:

1. How many fires occur in the unincorporated areas of the county annually?
2. How many fires are investigated by the County Fire Marshal's Office?
3. How many fire investigators are in your County Fire Marshal's Office?
4. Are these combination positions?
 - a. No
 - b. Yes, Investigator/Inspector
 - c. Yes, Investigator/Public Educator
 - d. Yes, Other
5. How do you fund your fire investigation program?
6. Do your investigators stay on a fire scene alone if the fire district chooses to leave or leaves prior to your arrival?
 Yes No
7. Do you contract with fire districts for fire investigations?
 Yes No
8. Do you participate as a member of a fire/arson investigation task force?
 Yes No

APPENDIX B
YAKIMA FIRE CHIEFS
FIRE INVESTIGATION SURVEY

Name:

Department:

1. How many career fire fighters are on your department?
2. How many volunteer fire fighters are on your department?
3. Do you conduct fire investigations?
 - a) No
 - b) Yes, Origin and cause only
 - c) Yes, Assist in criminal investigation; i.e., interviewing, evidence collection
4. How many trained fire investigators do you have on your department?
5. Do your fire investigators have additional duties?
 - a) No
 - b) Yes, Investigator/Firefighter
 - c) Yes, Investigator/Inspector
 - d) Yes, Investigator/Other
6. Would you be interested in pursuing a fire investigation task force?
 Yes No
7. In your opinion, when should a Yakima County fire investigator be requested?
 - a) When origin and cause cannot be determined
 - b) Large dollar loss fires
 - c) Fatality
 - d) Suspicious, arson fires
 - e) All of the above
 - f) All fires

Please include any additional comments you believe are pertinent to improving fire investigation services in Yakima County.

APPENDIX C**YAKIMA COUNTY PUBLIC WORKS DEPARTMENT
PERMIT SERVICES DIVISION
FIRE PROTECTION BUREAU

POLICY AND PROCEDURES**

SUBJECT: Fire Scene Investigation
Call-out Criteria

PURPOSE: To provide standard operating guidelines for all departments regarding the response of a County Fire Investigator.

POLICY: It is the policy of the Fire Protection Bureau to assist local fire districts in the investigation and determination of the origin and cause of fires occurring within the unincorporated areas of Yakima County.

AUTHORITY & RESPONSIBILITY: The Incident Commander shall have the authority and responsibility to call for a County Fire Investigator whenever deemed necessary.

PROCEDURE:

- I. The Incident Commander is to request, through the appropriate Fire Communication Agency, dispatch of a County Fire Investigator to fires or explosions within the unincorporated areas of Yakima County when one or more of the following apply:
 - A. Suspicious fires
 - B. Undetermined causes
 - C. Fatalities
 - D. Fire injuries
 - E. Total loss (excluding outbuildings, sheds, etc.)
 - F. Fire in Institutional, Educational, or Licensed Care Occupancies

The County Fire Investigator shall respond only to requests received through the appropriate Fire Communication Agency.

- II. The Incident commander may call for a County Fire Investigator at any time. Fires that are less than \$10,000 in loss, as mutually determined by the County Fire Investigator and the Incident Commander, may have the cause investigation delayed until the next normal workday.

- III. Upon dispatch, the County Fire Investigator is responsible to respond and notify the appropriate Fire Communications Agency that he/she is responding to the incident and give an estimated time for arrival. The County Fire Investigator shall also notify the County Fire Marshal or the Permit Services Manager at the time of response. If the County Fire Investigator is out of service or unable to respond, it shall be at the discretion of the Incident Commander to investigate through the fire protection district or other available resources. Copies of reports for fires occurring within Yakima County shall be sent to the County Fire Marshal's Office.
- IV. Upon arrival, the County Fire Investigator is to first notify Fire Communications by radio contact and then proceed to the Incident Commander for any available information, after which the County Fire Investigator will be released to perform the functions.
- V. The County Fire Investigator shall not enter the fire scene until it has been evaluated and meets minimum criteria for acceptable air quality. The site Safety Officer for the incident shall be responsible to make the decision that no SCBA is required and shall specify other protective apparel or equipment appropriate for the threat. If, at any time, the County Fire Investigator believes the scene to be unsafe, he/she shall leave the premises.
- VI. The agency requesting the County Fire Investigator shall be responsible to provide stand-by personnel and resources as needed to assist the Investigator. Responsibility for lead investigator, photography, drawings, interviewing, etc. shall be determined by the authority having jurisdiction
- IX. For areas located within Yakama Nation trust land, the County Fire Investigator shall not respond.