Death and Communication: An in-depth analysis of the internal/external communication on the Thirtymile Fire Incident

Charlynn Malcom
Carroll College, Helena, MT
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Thirtymile Fire Incident

Charlynn Malcom

Communication Studies Department

Carroll College
This Thesis for honors recognition has been approved for the
Department of Communication Studies.

Rick Moritz, M.A., Director
Date

Linda MacCammon, Ph.D., Reader
Date

Dennis Wiedmann, M.A., Reader
Date
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This paper is dedicated to all those who have died while fighting Wildland Fire, especially, Tom Craven, Devin Weaver, Jessica Johnson, and Karen FitzPartick who died on the Thirtymile Fire and to Jeff Allen and Shane Heath who died on the Cramer Fire.
Abstract

Using the Thirtymile Fire Incident of 2001 in Washington and the Cramer Fire Incident of 2003 in Idaho as case studies, I investigate the communication between crews on each fire. I focus on the Thirtymile Fire Incident and how the deaths of four young firefighters resulted in a congressional hearing based on the rules and regulations firefighters must adhere to when on duty. The one major regulation implemented by firefighting agencies after the Thirtymile Fire Incident was based on officials blaming the deaths on the wrong causes that resulted in the creation of new regulations that would not prevent deaths at all. The proof that the new regulations did not prevent future deaths can be found in the Cramer Fire Incident, in which all persons adhered to the newest regulations, and still lost their lives. This paper’s focus is on how the vital role of communication in fighting fire is often one of the last things considered, especially as communication affects interaction.
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Chapter One

Introduction

The fire season for full-time Wildland Firefighters begins in March or April as the crew chiefs for the various crews begin their summer hiring. There are several types of crews: engine, hotshot, helitack, and type-two crews, all of which need seasonal employees from May through August or September. College students needing employment for the summer fill many of these positions since the schedule fits well with their semester break. These jobs pay well. Base rates range from $10.50 to $15 and hour, and this does not include overtime pay, hazard pay, Sunday or night differential pay. As a result a two-week paycheck can range anywhere from $600 to $3,000, depending on base salary and number of hours worked. The seasonal employees who fight fire are valuable and renewable resources for the Forest Service, Bureau of Land Management, National Park Service and the Bureau of Indian Affairs. But it is these same summer employees who often pay the ultimate price for mistakes made by their employers.

In June of 2001, I attended fire school training for rookies. The training lasted for one week and covered the basics of fire behavior, fire strategy, and the ways in which Wildland Fire is fought. The training culminated with a day’s worth of training called, “Standards for Survival”. This section of the course is taken every year by all firefighters, irrespective of seniority and deals with the basics of how to use the fire shelter and how to recognize good deployment sights for fire shelters. After about three
hours of classroom time, everyone must practice deploying with practice shelters. Firefighters are timed and often there are fans present to simulate the winds associated with Wildland Fire. This is the fire training that every rookie firefighter will go through before they are allowed on the line to fight fire. Tom Craven, Devin Weaver, Jessica Johnson, and Karen FitzPartick went through this training before they were cleared to go on their first fire. For three of the four firefighters, their first fire would also be their last.

On July 9, 2001 an escaped campfire was spotted around 9 p.m. in North Central Washington on the Okanogan National Forest along the banks of the Chewuch River by a Canadian lead plane leaving the Libby Fire which was just a few miles away. On July 10, 2001 around 4:30 p.m., two squads from the Northwest Regulars #6 who had been working on the fire for most of the day were trapped when the fire blew up cutting off their escape route. In a little over an hour after the blowup began, four firefighters would be dead.

In the days following the incident, several questions were asked. The primary question was, “What happened within the crew as the raging fire grew closer that caused the deaths of only four of the firefighters present?” There are several reasons that have been attributed to the deaths of these four young people. One of the major finding from the official investigation was that a lack of sleep contributed to the poor decision making of all members on the crew, thus inhibiting their ability to think clearly and make a life saving decision. I submit there is a different, more difficult problem to solve than lack of sleep: poor communication between the crews on the fire and, more importantly, the poor
quality of communication within the crew itself caused the firefighters to find themselves in that fatal situation.

Having been on several fire crews over the last three summers, I can report that safety has been the number one priority of Forest Service Training. However, communication is rarely a topic of discussion. While safety is important when dealing with fire, one of the best ways to provide for safety is through good communication within a crew, between crews, and between support staff and crews. Most crew leaders have radios that allow them to communicate with other crew leaders and supervisors. Many crews also require that individual crewmembers have radios as well. The crew leader I worked with over the last two summers requires all personnel to carry a radio. Many people in the firefighting world associate good communication with having a radio set on the right frequency. What many do not take into consideration is that often these radios cannot be heard when pumps and chainsaws are in the immediate area, or that a crewmember or crew may be in a frequency “dead zone” for radio contact.

This paper considers the communication breakdown in two specific fires, Thirtymile and Crammer, and how these breakdowns caused the death of six firefighters over the last three years. Initially, I examine the Thirtymile Fire. I then discuss the effects the incident and its official report had on the rest of the firefighting community as well as the subsequent congressional actions initiated to strengthen regulations for Wildland Firefighters. These new regulations were supposed to save the lives of firefighters in future. However, two years after the Thirtymile Fire, two more firefighters were killed in Idaho on the Crammer fire while following the newest protective
guidelines set forth by Congress. I contend the communication breakdown in both fires led to the deaths of the six firefighters, deaths that could have been prevented in either instance if communication between crews, within crews, and between crews and support staffs was effectively maintained and efficiently executed.
Chapter Two

Literature Review

The subject of communication and its role in fighting Wildland Fire has only recently generated public interest. To understand the role of communication in the world of fighting Wildland Fire, we must first look at some of the research and finding of communication scholars, sociology scholars, novelists and Wildland Fire specialists through their examination of the tragic loss of life on recent Wildland Fires. These early publications as well as firefighting manuals provide a foundation to further explore the current role of communication in fighting Wildland Fire by examining firefighting though an organizational approach as well as by looking at safety and ethics.

Thus far in my research I have found only two communication articles involving Wildland Fire, one by Karl Weick and the other by Gregory Larson. Karl Weick wrote an article that appeared in the 1993, *Administrative Science Quarterly*. The article focused on the Mann Gulch Fire of 1949 and is entitled “The Collapse of Sensemaking in Organizations.” The central theme was why organizations collapse and what can be done to prevent individuals from collapsing, thus allowing the organization to remain in tact.

In 2002, Gregory S. Larson published an article in the *American Communication Journal* on the 1994 South Canyon Fire entitled “A Worldview of Disaster: Organizational Sensemaking in a Wildland Firefighting Tragedy.” This article focused on how people within organizations need to look beyond their perception of reality, and how their actions affect the rest of the organization.
Something I find interesting about the two communication articles is that they use the two most famous Wildland Fires. Both of these fires have been written and studied extensively. In fact, novels have been written about both: John Maclean wrote Fire on the Mountain: The True Story of the South Canyon Fire in 1999, and Norman Maclean wrote Young Men & Fire in 1992. These two books give a very detailed description of events leading up to the fires and the most accurate portrayal of events during the “blowup” of each fire.

Sociologist and Forest Service Employee Jon Driessen published a paper while working at the Technology and Development Program for the USDA Forest Service in Missoula, Montana entitled “Crew Cohesion, Wildland Fire Transition, and Fatalities” (Driessen). The paper focuses mainly on the Mann Gulch, South Canyon, and Thirtymile Fires. The focus of Driessen’s paper is how intra-crew cohesion and inter-crew cohesion can affect the performance of a crew on a fire and how a crew will act in the face of danger based on these levels of cohesiveness. Driessen was the only sociologist on the official investigation team for the Thirtymile Fire.

Another paper, “Precursor for Error,” presented at the third International Wildland Fire Conference in Australia on October 3, 2003, addresses the issues of trust within a crew and between crews when looking at safety guidelines on the fire line. L.S. McDonald and L. Shadow analyze some of the findings of a 1998 study done by the TriData Corporation comparing the culture of Wildland Firefighting to the culture of commercial airline pilots and their crews. This study found that the U.S. Wildland Fire industry organizational climate consistently ranked among the very top scoring airline
organizations (McDonald, p.3). The study also found that over half of firefighters surveyed feel that an Incident Management Team might be willing to compromise safety in order to accomplish the incident objectives (McDonald, p.5). This statistic reflects the level of trust between the operational ground units and the command teams that indicate possible problems with the enforcement of safety policy during incidents or inconsistent training and application of risk management practices with Incident Management Teams (McDonald, p.6). This feeling was especially high with helitack crews. The paper emphasizes communication as the key to successful fire fighting, but offers no solutions to make sure effective communication is taking place on the fire line.

The last article I found relating directly to firefighting is not exclusively an article, but rather a booklet used in fire training. “Standards for Survival: A Basic Lesson in Firefighter Safety.” was updated in 1987 by the National Wildfire Coordinating Group located in Boise, Idaho. This booklet is used each year as part of a class all firefighter must take in order to be certified to fight fire for the upcoming fire season. The entire thirty-five-page booklet is used in conjunction with a video. The participants watch a series of videos that display firefighters in action. The participants are asked to identify and select any fire orders and/or watchout situation violations. Then the participants discuss their finding and ways the video firefighter could have extinguished the fire following the fire orders and watchout situations.

In 2002, one year after the Thirty Mile Fire, a new refresher course for all firefighters was created to replace the old “Standards for Survival.” The new student handbook begins with two pages of fire entrapment, shelter deployments and fatalities
percentages. The percentages are broken down in several categories from size of fires to percentages within the several different firefighting agencies. One major change in the new refresher is a rearrangement of the 10 Fire Orders from the standard FIRE ORDER acronym to the original order of the ten.

<table>
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<th>Original</th>
<th>Acronym</th>
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<tr>
<td>Keep informed on fire weather condition and forecast.</td>
<td>Fight Fire aggressively but provide for safety first.</td>
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<tr>
<td>Know what your fire is doing at all time. Observe personally, use scouts.</td>
<td>Initiate all action based on current and expected fire behavior</td>
</tr>
<tr>
<td>Base all action on current and expected fire behavior of the fire</td>
<td>Recognize current weather condition and obtain forecasts.</td>
</tr>
<tr>
<td>Have escape routes and make them known</td>
<td>Ensure instructions are given and understood.</td>
</tr>
<tr>
<td>Post a lookout when there is possible danger</td>
<td>Obtain current information on fire status.</td>
</tr>
<tr>
<td>Stay alert: Keep calm: Think clearly: Act decisively.</td>
<td>Remain in communication with crew members, your</td>
</tr>
<tr>
<td>Give clear instructions and be sure they are understood.</td>
<td>supervisor and adjoining forces.</td>
</tr>
<tr>
<td>Maintain prompt communications with your men, your boss and adjoining forces.</td>
<td>Determine safety zones and escape routes.</td>
</tr>
<tr>
<td>Maintain control of your forces at all times.</td>
<td>Establish lookouts in potentially hazardous situations</td>
</tr>
<tr>
<td>Fight Fire aggressively but provide for safety first</td>
<td>Retain Control at all time</td>
</tr>
<tr>
<td></td>
<td>Stay alert: Keep calm: Think clearly: Act decisively.</td>
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The new refresher course also has a section that details the situation the fire fighters at Thirtymile faced. The participants of the training session are asked what they would do if they were in a situation with weather conditions and topography conditions similar to the Thirtymile Fire. Also included is the timeline of events from the Thirtymile Fire. This new training program is a direct result of the Thirty-mile Fire and the actions of federal government officials to in sure no one else dies while fighting Wildland Fire.

In 1998 David E. Williams and Bolanle A. Olaniran published an article in the magazine *Technology and the Corporate* entitled “Expanding the crisis planning function: introducing elements of risk communication to crisis communication practice.” The
The article focused mainly on crisis communication within a Public Relations (PR) Firm. However, there is some valuable information that applies to more than just PR firms. The article mentions that during a crisis individuals often are in denial, they evade responsibility, reduce offensiveness, do not take corrective action and often experience mortification (Williams, p.4). The article also mentions some research done by Gonzalez-Herreo and Pratt on crisis management. Williams and Olaniran sum up the study done by Gonzalez-Herreo and Pratt by stating that the “outcomes of this research was the development of a crisis lifecycle and a very detailed matrix of response strategies during particular times of the crisis and under specific circumstances” (William, p.5).

Matthew W. Seeger wrote a fascinating article while at Wayne State University published in the American Communication Journal entitled, “Ethics and Communication in Organizational Contexts: Moving from the Fringe to the Center.” The section of this article that is applicable to this paper is the section on responsibility and accountability. Seeger defines responsibility as “a moral obligation to some larger groups or social structure such as family, community, and organization (Seeger, p.2). Seeger defines accountability as a critical social process that insures individuals bear the consequences for their own actions (Seeger, p.3). Seeger goes on to say that responsibility must be an individualized construct and that responsibility locates accountability on individual manager and decision-makers (Seeger, p.3). Seeger talks at a great length about the difficulties in making people be responsible and accountable within organizations. The problem lies in organizations allowing people to get by with making mistakes when they should have held these individuals responsible and accountable for their actions. Also,
organizations usually do not explicitly discuss ethical issues and do not make these discussions part of the ongoing discourse of the organization (Seeger, p.4).

John Lawson and Tom Bourner published an article in the Journal of Applied Management Studies entitled “Developing communication within new workgroups.” To write this article one of the author’s embarked on a longitudinal study of newly established workgroups (Lawson, p.2). The main point of the article was to illustrate the difficulties of working with new people for the first time. One item mentioned in the article was the need for both task and social-emotional needs to be met. “When attention is focused on the task, tension emerges in group members’ social and emotional relations (Lawson, p.6).

Since the beginning of Wildland Firefighting in 1926, over 400 people have lost their lives to fire induced injuries (Common Denominators p.2). This number may not sound high when compared to the number of Americans killed since the United States entered Iraq in the fall of 2003. However, with any military operation the loss of life is expected. Loss of life is taken into consideration when planning an attack or mission. However, when fighting Wildland Fire, death is not part of the plan (Common Denominators p.2). When a death occurs on a fire it is shocking and humbling to a society that does not view itself as vulnerable. With so many fatalities suffered in a field of summer employment consistently gaining popularity with college students, it is surprising that only a few fires have been targeted for communication theory and application. All of the authors and the articles examined for this paper offer some important advances for the those working in high risk jobs. However, they do not
address the main role of communication in a crisis situation, which I believe to be the chief cause of the deaths on the Thirty Mile Fire.
In this paper I apply the Classical and Critical approaches from the academic field of Organizational Communication because each approach offers theories and practices I have encountered while fighting Wildland Fire. The ridged command structures of Classical Organizational Theory paired with the power concept of Critical Organizational Communication Theory are a major construct of fighting fire. Without the command structure currently in place for fighting Wildland Fire and the power exerted by those in command, firefighters would suffer fatalities at a much higher rate. Had the command structure and the power placed in those in command been effectively utilized on the Thirtymile Fire, the four individuals who lost their lives may have lived.


Classical Approach

The Classical Approach to studying organizations is often characterized as the machine metaphor of organizing. The machine metaphor has three main parts: specialization, standardization, and predictability. Specialization refers to the specialization of a task. One person has a special job and is very good at accomplishing
it, while another person in the same organization has a different special task, and so on (Miller, p.5). Standardization includes the notion of replaceability. Since one part of the specialization is also a standardized part, a person can easily be replaced without any harm to the organization as a whole (Miller, p.5). Predictability refers to how an organization can find where a problem has occurred. For each specialized part there can only be a finite set of possible errors. This error set can be assessed, and the problem easily identified and fixed (Miller, p.6).

Another construct of the Classical Approach is the modern operation-management theory developed first by Henri Fayol, often described as the father of this theory. Fayol was a French industrialist who created a two-part theory that deals with management within a classical organization: elements of management and principles of management. There are five elements of management: planning, organizing, command, coordination, and control. Fayol does not include communication as one of his elements of management. However, none of his elements can be completed without the use of communication (Miller, p.7). Fayol lists four principles of management that show how management can best function: principles of organizational structure, principles of organizational power, principles of organizational reward, and principles of organization attitude. Each of these four categories are again broken down by Fayol into more specific ways of managing an organization (Miller, p.8-10).

One interpretation of Classical Approach is found in the work of the noted sociologist Max Weber. Weber developed an approach that is often referred to as the ideal type of classical organizational theory. "Ideal type theory does not advocate a
particular organization form as best but rather lays out the feature of an abstract-or
idealized-organization of a given type" (Miller p.11). Weber’s Theory of Bureaucracy,
has six essential parts: (1) clearly defined hierarchy, (2) division of labor, (3)
centralization of decision-making and power, (4) closed system, (5) importance of rules
for organizational functioning, and (6) function of authority. Weber places emphasis on
the function of authority by creating three types of authority; traditional, charismatic and
rational-legal (Miller, p.10-13).

Fredrick Taylor developed a modern classical theory called the Theory of
Scientific Management. Taylor outlines this theory in his book The Principles of
Scientific Management. While there are many parts to Scientific Management, the four
intrinsic components are: (1) there is one best way to do every job, (2) there is one best
worker for every job, (3) training workers is ultimately importance, and (4) three is an
inherent difference between management and workers. (Miller, p.13-16) Taylor believed
scientific management can effectively correct uneven work and “eliminate the social
interaction that sometimes leads to systematic soldiering” (Miller, p.16).

Communication in Classical Organizations has four main characteristics that
describe the way people tend to communicate. (1) The content of communication is task,
(2) the direction of communication flow is vertical with a downward flow, (3) the mode
or channel of communication is usually written, and (4) the style of communication is
always formal (Miller, p.17-20).

Examples of organizations that have a Classical Approach to communicating are
the United States Military, many fast food restaurants, or an assembly-line production
plants. These organizations have determined the one best way to run a unit, make a hamburger, or put together a product (Miller, p.21). Firefighting fits into the Classical Approach because firefighting activities often resemble those of a military operation at war. The war being fought in the forest is different than actual warfare, but, there are similarities: massive amounts of crews need to be transported and given instruction, several “battle” objectives to contain and extinguish fire are simultaneously pursued, and mistakes result in deadly consequences. This type of work requires a system of strict control and leadership to maintain order, safety, and productivity.

**Critical Approach**

The central concept of Critical Theory is power. Critical theorists see power as “a defining, ubiquitous feature of organizational life,” (Miller, p.117). Conrad and Ryan outline three approaches to power: traditional, symbological, and radical-critical. The traditional approach to power states that power is a relatively stable entity that people or groups possess. The symbological approach to power views power as a production of communicative interaction and relationships. In the radical-critical approach theorists are interested in the “deep structures” that reproduce relationships in organization life (Miller, p.118). Morgan found 14 such structures: (1) formal authority, (2) control of scarce resources, (3) use of organizational structure, rules, and regulations, (4) control of decision processes, (5) control of knowledge and information, (6) control of boundaries, (7) ability to cope with uncertainty, (8) control of technology, (9) interpersonal alliances, networks, and control of “informal organization”, (10) control of counter organizations,
(11) symbolism and the management of meaning, (12) gender and the management of gender relationships, (13) structural factors that define the stage of action, and (14) the power one already has (Miller p. 119). Critical theory suggests that those in power control the modes and means of production, gender issues, organizational discourse, ideology and hegemony, and emancipation.

Power and control are central to the critical approach in organizations. Concertive Control Theory is exclusively concerned with control. This theory facilitates “a more ‘democratic organizational form.’” “The theory attempts to explain how power relationships can be transformed in an era of team-based and “alternative form” organizations” (Miller p.125). The three central concepts to concertive control theory are control, identification, and discipline.

Stanley Deetz sees critical theory as a way to explain the way corporate America has influenced everyday life. Deetz critiques the easy assumption that “what’s good for General Motors is good for the country” (Griffin, p.286). Deetz has four categories in which public decision and corporate decisions can be made: strategy, consent, involvement, and participation (Griffin, p.287). Each of the four categories describes what is expected of employees and managers depending on whether the category falls into managerial control or co-determination, or if the category is in an information model or a communication model. No category offers solutions to the problem Deetz says exists. The categories are a means to determine what type of control in being asserted over the employees.
Firefighting fits into the critical approach because the power given to the lowest level firefighter is non-existent. Most decisions are taken out of their hands. For example, which fire crew will be assigned to an incident is decided by the dispatcher in charge of a district or forest, or through the national data base for available crews via the dispatcher, who notifies the crews or individuals. A crew’s job on a fire depends on what the fire is doing, what other crews on the fire are doing, and the nature of the fire behavior. In many instances it is the fire, not the IC, who determine what a firefighter will be doing on any given day. Often the crew boss or squad boss determines the tools used by firefighters. This action takes even more power from the firefighter. The only decisions left to the firefighter are how to dig line, or lay hose. Even these decisions have been taught to the firefighter by a more experienced firefighter. While the average firefighter is not given power to decide where or when she or he will fight fire, the firefighter is not completely powerless. A firefighter has the power to reject an assignment. While a lot of power can be taken away from someone, the power to protect oneself is essential and can never be taken. There have been times when a firefighter has chosen not to obey the commands of the supervisor and lived to say “no” another day while the rest of the crew perished.

Elements of the Classical and Critical Approach to organizations can be used to explain the role of communication on Wildland fires and the roles firefighter fill within the organization norms. However, neither approach begins to explain the complex roles firefighters have within the Forest Service and other Wildland Fire organizations nor do they explain the complexities of crisis communication. At this point there is no approach
and very little theory to understand the communication that occurs within an organization as it enters into a crisis situation.
Chapter 4
Timeline of Events for Thirtymile Fire

All of the information in this section is taken from the Official Investigation Report of the Thirtymile Fire. I use the Incident Overview pages 1-19 along with the Appendix: Time Line pages 50-52. A vicinity map of the Thirtymile Fire can be found in Appendix A.

On July 9th, 2001 an unattended campfire in the Okanogan Nation Forest ignites a fire along the Chewuch River in northern Washington State at approximately 9 p.m. At 9:30 p.m. a Canadian lead plane (the plane that leads an air tanker with fire repellent to the “drop” location) reports the fire to Okanogan dispatch. A three-person Initial Attack (IA) crew along with Engine #704 is dispatched to the fire 30 miles north of Winthrop, Washington.

At 11:00 p.m. the three-person IA crew arrives at the fire and estimates its size between three and eight acres. Shortly after arrival, the Incident Commander (a member of the IA crew) asks for a 10-person crew and two engines to be assigned to the fire along with a Type 3 or 4 IC (Type 4 IC’s handle fire with six or more persons, a Type 3 IC handles fires that a Type 4 IC feels are out of their knowledge range). At approximately 11:49 p.m. Engine #704 arrives at the fire. Ten minutes after arrival the fire estimate grows to somewhere between 20 and 25 acres and continues to grow through the night.

In the next hour, the fire spreads across the river. At approximately 1:00 a.m. the Entiat Hotshot Crew (Entiat IHC) and two-person chase truck (Hotshot crews are highly
trained firefighting crews and are considered an elite firefighting group) arrive at the fire. At this point the fire has become too large for the current IC to handle and he gives control of the fire over to the Entiat IHC Superintendent. The new IC releases the IA crew as well as the engine. The Entiat IHC begins work immediately to line (create a six inch to one foot dirt line around perimeter of fire to remove burnable vegetation) the fire on the west side of the river. The Entiat IHC completes this task around 1:48 a.m. and then heads across the river to line the several spots fires (small fires that are not part of the main fire). At 2:15 a.m. the IC requests a helicopter and bucket as well as two Mark III pumps with kits, hose, wyes, nozzles and reducers (wyes and reducers are items used to connect lengths of hose together, nozzles are used to get water out of the hose). At 5:00 a.m. dispatch confirms Helicopter 13N will be available around 10 a.m. At 5:30 a.m. the Entiat IHC lines five of seven spots covering approximately five to six acres on the east side of the river. At this point the IC decides a rest and breakfast are needed. Entiat IHC moves back across the river. They return to the east side to continue work on the spots at approximately 6:30 a.m.

At 9:00 a.m. the District Fire Management Officer (FMO), the Forest FMO, along with the Northwest Regulars #6 (NWR) Type II crew (a Type II crew is similar to an IHC but they are not as specialized or elite) arrive at the fire. The District FMO, Forest FMO, NWR, and the Entiat IHC Superintendent meet to discuss the fire and plan of attack. The NWR Crew Boss assumes the role of IC at this point so the Entiat IHC can sleep. The NWR Crew Boss Trainee briefs the NWR about the fire and what the plan of attack is for the rest of the day. The crew is told the fire has been estimated by the Forest FMO to be
about three acres of spots scattered over a five-acre area with little fire activity. The Forest FMO orders another crew to assist with the mop up operations. The District FMO orders the road to be closed, but this is not done until later that afternoon.

At 11:00 a.m. Entiat IHC leave the fire to bed down at a campground about two miles down river. NWR begins mop up operations by setting up Mark III pumps (Mark III pumps are the most commonly used water pumps on a fires) to get water to the spots. The NWR begins having trouble keeping the pumps running, hoses begin breaking in addition to a few Pulaski’s (A Pulaski is a tool with an ax at one end and a hoe on the other. Pulaski’s were developed by Ed Pulaski near Libby, Montana in the early 1900’s).

Around noon the NWR Crew Boss Trainee decides to begin digging line in front of the oncoming fire in hopes of pinching it off at the head of the fire. The digging is difficult due to several roots and underbrush. The IC of the fire requests Helicopter 13N and one or two more crews. Air Attack (helicopters with buckets and fire retardant planes form an aerial assault on the fire) from the Libby South fire diverts its attention to the Thirtymile fire.

At 1:00 p.m. two civilians drive past the fire and crew toward the Thirtymile campground up river from the fire. A NWR crewmember is sent to wake up Entiat IHC. IC asks for more crews again as well as for the Helicopter. At 2:00 p.m. Entiat IHC arrives back at the fire and the IC of the fire is informed that Helicopter 13N is on its way. At 3:00 p.m. NWR crew leaves the line to have lunch on the west side of the river. About half an hour latter engines #701 and #704 drive past the crews having lunch. The Engines do not check in with the IC. At 4:00 p.m. a lookout reports the fire is beginning
to form its own thunderhead. At this time Engine #701 requests a squad to help them with spots. Squad 1 of the NWR is taken by van to support Engine #701. Twenty minuets latter Engine #701 requests a second squad. Not long after the arrival of the second squad, Engine #701 leaves to work some spots further down the road. At 4:30 p.m. Squad 3 heads up to help engine #704. As soon as Squad 3 arrives at Engine #704 they retreat to the lunch spot along with Engine #704. At this point the fire burns across the road cutting off the road for NWR squads 1 and 2. Both squads pile into one van and head up river away from the fire to find a suitable spot for possible deployment.

With the help of air attack the NWR crew boss, who is also the IC, picks a spot along the road that looks suitable for waiting out the fire. The crew leaves the van and begins to explore the area. Some crewmembers decide to climb a rock scree to watch the fire approach. No briefing is given to any of the crewmembers as to what to expect or do if they need to deploy their fire shelters. As the fire gets closer the IC tries to get the crewmembers on the rocks to follow. Either the crewmembers do not hear the IC or they decide to ignore his orders and continue to watch the fire.

At 5:00 p.m. Air Attack estimates the fire to be around 500 acres and moving up river, up canyon mostly on the east side. A few minutes after 5:00 p.m. two civilians come down the road and join the crew. There are no spare fire shelters given to the civilians but long sleeve shirts are available.

At approximately 5:24 p.m. the fire begins to increase, and despite the little vegetation near the area of the crew, the intensity of the fire is enormous. As the fire grows closer the IC yells to everyone to deploy shelters immediately. Several hear him
even though the fire is moving fast and is extremely loud. Others have a hard time deploying due to the huge gusts of wind and smoke coming at them. At this time there are still six people on the rock scree above the road.

One of the crewmembers on the rock scree is a squad boss. Thom Taylor. He is much higher than the others on the scree and begins running down the slope yelling at them to deploy their shelters. Thom then runs up the slope before he himself deploys. Not long after deployment the fire comes upon the group on the hill. Thom is convinced his shelter will not hold up against the current conditions so he leaves his shelter, runs to the road and jumps in the river. He does not tell the other five crewmembers on the hill to follow him. One of the five remaining crewmembers on the hill, Jason Emhoff, is not wearing gloves when he deploys his shelter and his hands begin to burn; he leaves his shelter and heads to the road were he gets into the van. Jason also does not let any of the other crewmembers on the slope know what he is doing.

Back down on the road the IC tries to keep the crewmembers calm by talking to them. He is also in radio contact with Air Attack monitoring the conditions outside the shelters. When the IC feels it is safe, he orders the crew out of their shelters and joins Thom in the river. About half an hour after deployment, the NWR Crew Boss Trainee along with the Entiat EMT team arrives at the deployment site. At this point the Entiat ICH Superintendent takes over the fire until the appropriate personnel arrives to handle the situation.

When the IC realizes that four crewmembers are on the rock scree, he asks for help to get up to them. No one can climb the rock scree because it is too hot. The Entiat
IHC Superintendent tries to detect some sign of life from the four shelters but sees nothing. It is latter determined that the four died from asphyxia due to inhalation of superheated products of combustion.
Chapter Five
Application of Theory

Fighting large Wildland Fires is comparable to a military operation. Both involve such things as an organization with a general at the head, massive movement of personnel and equipment, tactical aerial support, and long periods of combat and stress until the enemy is finally conquered (p. 1 Common Denominator). As in the military, Wildland Firefighting is broken down into several specific units. There are Smokejumpers who jump out of airplanes to get to fires. This resource is mostly used for Initial Attack (IA) work. Other Initial Attack crews include Engine Crews, Helitack Crews, and three to five persons hand crews. Engine Crews specialize in the use of water, pumps, hose lays, water usage, foam usage, as well as other basic Wildland Fire skills. Helitack Crews repel from helicopter to fires. These crewmembers are also trained in how to accurately use helicopters to help with fire suppression.

All of the above mentioned crews can, and often are used in Extended Attack (EA) fire operations. However, more specialized crews are used as well. There are two types of crews that are used specifically for EA. There are Hot Shot Crews (IHC), referred to as Type I Crews. These crews usually form in late April early May. The personnel on these crews train together and work together for several months. Since they are always together, people on these crews develop high levels of cohesion, learn how to work extremely well together, and are considered elite. The second type of crew is referred to as a Type II Crew. These crews are formed on demand from personnel within
a National Forest. Personnel on these crews often come from several Ranger Districts and often only vaguely know each other. These two types of crews both consist of approximately twenty people and are often split into squads. There can be from three to four squads within a crew. Each squad has a squad leader who reports to a Crew Boss. On IHC's there is a Crew Boss as well as a Crew Superintendent and an Assistant Crew Superintendent.

One of Max Weber's six essential parts of his Theory of Bureaucracy is that there must be a clearly defined hierarchy. The organizations that fight Wild Fires have developed a system of hierarchy called an Incident Command System. This system is broken down into Incident Command Teams. Within these teams there are more divisions that create a vertical hierarchy. Every fire being suppressed has an Incident Commander (IC) who is in charge of the fire. When the fire is small or in IA status the Crew boss of an Engine or the first Smoke Jumper on the ground is the IC. These personnel have been trained in suppression tactics and fire line leadership.

Fires are classified in five sizes. A Type 5 fire is the smallest with a Type 1 fire being the largest. To be an IC one must start with being a Type 5 IC and work her or his way up. Once a fire hits the Type 3 size a team is called in to handle the fire. Incident Command Teams (ICT) have the personnel to handle operations of several types of crews. Type 3 teams are assembled at the forest or district level. Type 2 or Type 1 teams are assembled at the Regional level and travel all across the United States to command large fires.
Each type of fire suppression unit has a command structure. The IC is the boss and command filters down through the organization at different levels depending on the size of the fire. IHC’s have the strictest command structure of any crew. Type II Crews are least likely to follow a strict command structure and to follow the directions of the crew boss when in tight situations due to minimal trust from “lack of training and working together” (Driessen p.5). This lack of trust helps to facilitate the breaking of Weber’s fifth and sixth parts of Bureaucracy Theory: the importance of rules for organizational function and function of authority. As I will demonstrate later, it is this lack of parts five and six that helped to create a situation from which the Northwest Regulars #6 (NWR) could not save themselves.

The Crew types and assignments fit well with the Classical Approach’s machine metaphor. Each Crew has its own specialized task or number of tasks that it can perform better than any other crew. These specialized tasks are standardized throughout the industry. Anyone who wants to learn the specialized tasks has the opportunity to do so. Predictability can be found through the standardization of tasks. For instance, if a pump is not working properly, the pump runner may not have been adequately trained to run the pump or to recognize the sounds of a leak or a hole in the hose line. When something goes wrong on the fire line, in most instances, it is easy to determine what and who made mistakes.

Henri Fayol describes five elements of management within classical organizations. These elements apply to firefighting crews in many ways. The first element is planning. No matter what size a fire is, its control and extinguishing demand
planning. Once a plan has been established, organizing the resources available to accomplish the plan is, depending on the fire size, relatively easy. Command is usually simple. In most cases there is one specific person or team member that is in charge of certain area of a fire or the fire itself. However, there are times when the person in command may not know they are in command or the crews working on the fire do not know who is in charge. This happened, for example, on the South Canyon fire in Colorado in 1994. There was an official IC, but the lead Smokejumper and the Prineville IHC Superintendent on the fire were asked to help with command decisions from the IC. So on this particular fire there were different people commanding the fire incident. As a result, none of the three “command” persons on the fire really took complete charge of operations on the fire, thus as Weber’s theory would suggest, there was no clearly defined hierarchy. While this was not the main reason 14 firefighters lost their lives on Storm King Mountain, it was one of many contributing factors (Maclean, J. p. 56, 75, & 115).

Coordination is also an important aspect of fighting fire, especially when more than one crew is assigned to the fire. It is the responsibility of the IC and support staffs to make sure everyone on a fire knows where the other crews are and what each is doing. This was something that failed to happen on the Thirtymile Fire. When Engines #701 and #704 were told to report to the fire, they did not check with the IC or the Entiat IHC to determine what they should do. They took it upon themselves to go farther up the road to work on spots. It was not until Engine #701 asked for assistance from the IC that the IC knew what the Engines were doing. If the Engines had checked in with the IC, the deaths of four firefighters may have been prevented. The IC could have sent the Engines...
up the road to work on spots, he might have kept them at the lunch spot to help the crews get the pumps working, or he could have directed them to help with the fire activity in their immediate area. This is something we will never know since the Engines failed to coordinate their activities with the rest of the crews and the IC on the fire.

The fifth element of Fayol’s elements of management is control. One of the 10 Fire Orders is “retain control at all times.” If we look at the original 10 Fire Orders we find that a firefighter is to maintain control of forces at all times. Both Fire Order sets establish control as an important aspect of fighting fire. Control was taken from the IC of Thirtymile when the Engines failed to coordinate their efforts with him, and control was lost at the deployment site when he failed to explain the situation to them when they first arrived at the site (again, Weber parts five and six). Control was also taken from the IC when the crewmember on the hill did not, or could not hear him telling them to get back on the road. The IC’s lost of control could have come from a lack of trust from the crew.

As the type II crew waited in the safety zone, they had collective uncertainty about whether to deploy on the road or on the rocks. Social psychologist Karl Weick (1993) refers to such periods of extreme uncertainty as “cosmology episodes…when people suddenly, and deeply feel that the universe is no longer a rational, orderly system (Driessen p. 6). Because of a lack of trust and control being administered by the IC, the two squads fell into two separate crews and joined those they trusted, rather than the one person who knew and had experience to help them through the situation. A similar example occurred in Montana during the Mann Gulch fire in which all of the
Smokejumpers failed to trust in their lead smokejumper when the situation became critical and all but a few died (Maclean, N. p. 74-75)

The control element of Fayol as well with the first, fifth, and sixth part of Max Weber's Theory of Bureaucracy provide an understanding of why the NWR's were not able to leave the entrapment site with no fatalities. Within the NWR's crew, there was clearly defined hierarchy: the IC was their crew boss, there was a crew boss trainee, and there were three squad bosses. However, there was no function of authority within the crew because no importance was placed on the rules that govern organizational functioning. For instance, all crewmembers knew who was in charge, but, when the crucial moment arose for the crewmembers to listen to their crew boss, some chose to ignore the traditional views of hierarchy. In Jon Driessen's article on crew cohesion, he quotes Karl Weick: “Collegial authority patterns overlay bureaucratic ones as the tempo of operations increase. Formal rank and status decline as a reason for obedience (Driessen, p.6). Had the Entiat IHC crew been trapped instead of the NWR's, we would have likely seen a crew who knew exactly who to trust and obey. The Entiat IHC and all Hotshot Crews pride themselves on the level of discipline within the crew and the importance placed on the rules that govern the organization as well as authority. The Entiat IHC crew would have stuck together during the entrapment.

When the NWR's arrived at their deployment site, the IC should have exerted his power over the crew members. He should have taken away power from the two squads bosses who were present. By taking this action he could have prevented both squad bosses from going up the rock scree to watch the fire approach and the five crew
members who subsequently followed. One of the Squad bosses did realize, too late, that the rocks were not a good place to deploy. That squad boss started down the rock scree only to have the fire race upon him. Why he did not continue down the rock scree, taking the other squad boss and crew with him, no one knows.

The IC also gave too much power to the individual crew members by not telling them what he thought was going on or going over proper deployment techniques. Many of the crew members were fresh from fire school and on their first fire. Many on them had only opened practice shelters once or twice and were really not familiar with proper deployment. The simplest deployment rule is to “place one’s feet in the direction of the oncoming fire” (Your Fire Shelter p.18), something many of the crew members did not do. In life or death situations the person in charge must take power and use that power to save lives. In these situations individuals need someone to take over their decision-making power. A possible reason for the Crew Boss to not take the adequate power and responsibility from his crew members is that he may have needed someone to take his power away. The Crew Boss was unaccustomed to making life or death decisions and in hesitating, chose to do nothing. The Crew Boss may have experienced one of Weick’s “cosmology episodes.” Such episodes occur when people suddenly and deeply feel that the universe is no longer a rational, orderly system. Weick says that what makes such an episode so shattering is that both the sense of what is occurring and the means to rebuild that sense collapse together (Weick, p.633).

The collapse of sensemaking could have also occurred to the Squad Bosses as they headed up the rock scree. One Squad Boss realized after he watched the fire
approach that the rock was not a good place to be. This is something both Squad Bosses should have recognized before heading up the rock scree. Perhaps they did not want to face the reality that they might have to deploy, something that is always left as a last resort. Instead they observed the fire to convince themselves deployment was not going to happen. We do know that one Squad Boss realized the severity of the situation and began to leave the rocks; however, what went through the other squad boss’s mind is only speculation. Using Weick’s cosmology episode definition, one can speculate that the second Squad Boss, even as the fire was getting near, louder, and stronger, could not comprehend the reality of what was happening and thus did nothing to save himself or his crew.

This same line of reasoning can also be used with the squad members who were on the rock scree. Their Squad Boss, someone they trusted, was still on the rock scree. This squad had good intra-squad cohesion, which led them to stop thinking for themselves. They had given that power to their friend and boss. They would follow his lead. The squad members also experienced the cosmology episode. They had no similar experiences and had never imagined themselves in the situation in which they found themselves. Thus, they had no ability to make decisions and were paralyzed by what they and their squad boss could not comprehend. All had lost power in themselves and needed someone to step up and take that power, they could not save themselves.

After having used Henri Fayol’s elements of management as a template for assessing the Thirtymile Fire, it is obvious that there were several problems within the NWR’S affecting communication between themselves and others on the fire. The most
frequent organizational communication mistake made by the NWR’s was not found using Fayol, but instead in Weber’s Theory of Bureaucracy. More specially, the lack of importance placed on the established hierarchy/function of authority and not adhering to the rules of organizational functioning infer Weber rather than Fayol. I stated earlier that if the Entait IHC crew had been trapped instead of the NWR then the outcome of the entrapment would have been different. I base this assumption on the importance of authority and structure within an IHC. However, that is not always the case. On the South Canyon Fire, several members of the Primeville IHC were killed in the entrapment with all the member of the Type II crew surviving (Maclean, J. p.202-203). This might seem inconsistent with my analysis of Thirtymile. However, there were breakdowns of command on both fires that resulted in fatalities. On South Canyon there were too many leaders, the function of authority was broken, and no respect was shown for the rules that govern the organization. On Thirtymile these rules as well as many more were broken. The similarities on Thirtymile and South Canyon are the failure to uphold the regulations set forth by the firefighting community. Karl Weick might argue that the collapse of sensemaking allowed for the failure in ignoring the established hierarchy and not adhering to the rules of organizational function. However, I feel that if the rules that allow the organization to function are ingrained in people’s minds, then when rational sense making does collapse, the individuals in the organization have something upon which to rely. They will act out of instinct rather than have to think about what needs to be done to survive.
Chapter 6
Aftermath: Effects of Thirty Mile

On November 14, 2001 the United States Senate committee on Energy and Natural Resources, Subcommittee on Public Lands and Forests held a hearing to investigate the Thirtymile Fire at the request of Senator Maria Cantwell (D-WA). Present at the hearing were Committee Chairman Bingaman (D-NM), Subcommittee Chairman Wyden (D-OR), Senator Craig (R-ID), Representative Hastings (R-WA), Forest Service Chief Dale Bosworth, Director of Fire and Aviation Management Mr. Williams, President of Tri-Data Mr. Schaenman, Professor Gleason from Colorado State University, and Ken Weaver, father of fallen firefighter Devin Weaver (Hearing, p.1).

The hearing’s main focus was on what happened at Thirtymile and what could be done to end firefighter fatalities. The committee asked several questions about current regulations and how they were followed. Many of the committee members questions dealt with why more changes had not been implemented after the South Canyon fire in 1994. Dale Bosworth noted that there were similarities between both South Canyon and Thirtymile, that several things contributed to the deaths of the four firefighters, and that the Forest Service was in the process of addressing several issues including fatigue, training, and accountability. Others at the hearing bounced around the subject of better, more experienced leaders (Hearing, p.1-4).

The topics aired at the Hearing Summary were nothing new to many firefighters or those in charges of implementing new rules. Most of the same safety rules and
regulations have been around since the beginning of firefighting in the early 1900’s such as the ten standard fire orders as well as the 18 watch out situations (often referred to as the 10 & 18). During a firefighter’s basic fire training, the 10 and 18 are drilled into her or his head. Then the firefighter gets to the line, and sometimes the 10 and 18 are ignored. Speaking from personal experience, there have been several occasions when I have Initial Attacked (IA) a fire when no escape route or safety zone has been identified. At first this raised some personal concerns, but I was working with individuals who had been fighting fire for most, if not all of their adult lives. I trusted these people; if they were not worried about escape routes and safety zones I should not be worried either.

It was not until my second year that I realized that part of my job was to remind these older, more experienced fire fighters of the basics. They may know where their escape route and safety zone is, but they need to express that critical knowledge to others. They should also discuss adequate safety zones and escape routes to ensure that everyone on the fire knows where and which are best. Being safe on the fire line did not mean that I had to know everything about fighting fire; I just needed to know how to communicate with those around me. Any firefighter should ask, “Why are we doing it like this?” “Why aren’t we doing this another way?” “Where are the escape routes and safety zones?” “Why are those the best safety zones and escape routes?”

When the Forest Service decided to try and implement new regulations and rules, they forgot to look at the most basic component of fire fighting, communication. Instead they focused on the obvious mistakes (sleep deprivation and weak leadership) that were made at Thirtymile. The biggest change to come from the Thirtymile Fire was related to
the mandatory amount of rest a person must get every night. A work/rest ratio had been in place for several years, but it was rarely followed.

The work/rest ratio being enforced in 2002 as a reaction to the Thirtymile fire states that for every two hours of work or on the clock duty the firefighter needs one hour of rest with the maximum amount of hours allowed to work being sixteen hours. This ratio works well when on large fires with many crews and set objectives for a shift of work. However, early in 2002 many problems with the work/rest ratio were discovered with Initial Attack (IA) crews. Most fires are not reported until late afternoon when many firefighters have worked about six or more hours. If the fire is large enough or in an area that requires work throughout the night, the firefighters must be replaced as they are nearing their sixteenth hour. Replacing firefighters in not necessarily a problem, unless that transition takes place at night. This presents a problem for the crews replacing the IA crew since one of the 18 watch-out situations is "country not seen in daylight." This creates as serious problem. No matter which course of action is taken in this situation, some rule or guideline will be broken.

The meeting on November 14, 2001 by the United States Senate committee was the only such meeting to address Thirtymile directly. After this initial hearing the decision as to the future of firefighting was left up the Forest Service and other agencies that coordinate firefighting efforts. Within the top ranks of the fire community Thirtymile was discussed and new regulations were deemed appropriate to prevent future deaths. However, these individuals focused on the same items that were presented to the senate committee: fatigue, training, and accountability. At the lower levels of firefighting
these items were treated as most information coming from above, one more administrative irritant.

At the time these regulations were sent down to the firefighters, I knew the new regulations would not save lives. I knew there was more to the accident than just lack of sleep and inadequate training. While these factors were part of the problem, they were not the entire problem. It was not until we were going over the events of the Thirtymile fire in my seasonal refresher course that I saw the problem of communication on the fire. The type of communication problem was not yet apparent to me, but it was obvious that communication breakdown was an issue. At that time I knew these new regulations would not save lives as they were intended to do. The investigation team as well as the United States Senate did not find the core problem of the accident. They were too busy trying to appease the public as well as the parents and loved ones of those killed. Through their quest to satisfy, they quickly drew conclusions without looking at the picture.
Chapter 7
Cramer Fire

When I first began my research into the Thirtymile fire and the effects it had on the firefighting community, my goal was to present the theory that these new rules would not work because they addressed the wrong mistakes on the fatal fire. My plan was to end this thesis with the theory that it would only be a matter of time before more people were killed fighting fire while following the new regulations. I imagined it would be awhile before another tragic accident would occur. Unfortunately, I did not have to wait long to find the proof needed to back up my future claim.

On July 22, 2003, two rappellers from the Indianola Helitack base, Jeff Allen and Shane Heath, were killed when the fire they were assigned to cut a helibase for, blew up and over ran then. The official investigation of the Cramer fire reported that, “based on a review of timesheets, each individual on the Cramer Fire was within their work-rest and length of assignment guidelines,” (Official Cramer p.29). The regulations to come out of Thirtymile failed to save the lives of Allen and Heath since they followed the work/rest ratio as well as other guidelines. So what caused Allen and Heath to lose their lives?

According to the report the main reason for the deaths on Cramer were due to irresponsible leadership by the IC and others engaged in running fire operations. Having reviewed the information in the official investigation, I believe leadership was an issue, but so was poor communication. The rappellers were told a helicopter was on its way to remove them from the helibase, when in fact it was over two hours before such a
helicopter was launched (Official Crammer p. 32). In this instance the Classical Approach to organizations was used but should have been ignored. The IC and others ignored the call for immediate pickup by the rappellers. In the Classical Approach orders are taken from above, not given to those above. This procedure was followed, however, and proven inadequate. Why the calls for help were not immediately answered is not given in the official report.

There is not enough information out yet about the Cramer Fire other than the official report, and that report is hard to read because several areas are blocked out for the general public. It is difficult to adequately analyze the communication breakdowns as well as other factors contributing to the deaths of Allen and Heath. I include this fire in this thesis to point out that the victims had followed the regulations from Thirtymile and still lost their lives; the wrong issues were evaluated and pushed to the forefront of discussion on the tragedy of Thirtymile.
Chapter 8

Conclusion

Questions for Further Study

Instead of new regulations, the Forest Service wisely concentrated on enforcing the current regulations. Unfortunately, they overlooked the most critical aspect of Thirtymile: the ineffective communication between crews and within crews. Although enforcing old regulations is important, and new regulations may be needed, additional emphasis should also be placed on communication.

Firefighting is communication-intensive, often requiring critical coordination between upper and lower organizational levels and peer units; is diverse in its operational requirement and threats; is dynamic in its tempo, the length of exposure, and the location of failure points (McDonald, p.3).

Many in the firefighting world do not know how to adequately communicate what they are seeing or doing with others and many are scared to do so for fear of insulting the person or persons in command.

Communication must be of the highest quality to build trust, and trust is a precondition for cohesion and effectiveness (McDonald, p.7). Cohesion and effectiveness are necessary to create a good working environment that not only results in productivity, but also will enable a crew to stick together and act as one when in a life threatening situation.

Wildland Fire is one of nature’s greatest events: when a fire “blows up,” it occurs as fast as a tornado with winds like a hurricane. Wildland Fire can sweep through fast
and end abruptly, or it can last as long as a flood. What determines which characteristic a fire will take on is up to the fire and the environmental conditions in which the fire is burning. Wildland Fire is an amazing source of nature’s fury. Those who fight it must be prepared at all time for the endless scenarios a fire can generate. Firefighters must work together to suppress Wildland Fire, and to do so they must be able to communicate effectively and efficiently or people will lose their lives.

Questions For Further Study

The study of communication on high-risk, high-stress jobs is a fairly new topic in the field of communication. Several of the current fields of communication could research high-risk, high stress jobs and the quality of communication within these jobs. Specifically, a cultural study on Wildland Firefighting, urban firefighters, police officers and military members may prove useful. Future study of stress communication and stress decision-making, as well as crew cohesion with communication is needed. Small group communication, interpersonal communication, communication ethics, as well as different approaches through organizational communication would all be useful venues for studies to facilitate people in high-risk, high-stress jobs.
Appendix A

Thirtymile Fire Vicinity Maps
Bibliography


Seeger, Matthew W. Ethics and Communication in Organizational Contexts: Moving from the Fringe to the Center. Department of Communication, Wayne State University.


