

United States Department of Agriculture

Forest Service

Technology & Development Program

5100-Fire March 2009 0951-2807-MTDC

Firefighter Cohesion and Entrapment Avoidance

Facilitator's Notes







Firefighter Cohesion and Entrapment Avoidance

Facilitator's Notes



Leslie Anderson

Program Leader, Fire and Aviation

Lisa Outka-Perkins

Project Leader

Jon Driessen

Social Scientist

Theron Miller

Social Scientist

USDA Forest Service Technology and Development Center Missoula, MT

5100 9E92P30 Entrapment Avoidance March 2009

The Forest Service, United States Department of Agriculture (USDA), has developed this information for the guidance of its employees, its contractors, and its cooperating Federal and State agencies, and is not responsible for the interpretation or use of this information by anyone except its own employees. The use of trade, firm, or corporation names in this document is for the information and convenience of the reader, and does not constitute an endorsement by the Department of any product or service to the exclusion of others that may be suitable.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Introduction	ii
Project History	1
The Program's Goals and Audience	1
Overview of the Program	2
Nuts and Bolts: Before Class	2
How To View the Program	3
Before Viewing Stories in a Section	3
Short Overview of Each Story	4
After Viewing Stories in a Section	
What Students Should Get From the Program	
Linking This Program to Formal Leadership Training	
References	

Introduction

hese notes are intended to help facilitators use the "Firefighter Cohesion and Entrapment Avoidance" program in training sessions. They include instructions on preparing for the class, showing the program, and leading discussion.

An additional resource to help facilitators is the paper "Crew Cohesion, Wildland Fire Transitions, and Fatalities." Also, facilitators who will be training leaders of crews that will be together throughout a season are encouraged to use "Making a Crew" as a part of their course material. For instructors who want to use the "Firefighter Cohesion and Entrapment Avoidance" program during fireline leadership training, additional resources are available in the "Linking This Program to Formal Leadership Training" section.

etween 1999 and 2003, a project team from the Missoula Technology and Development Center (MTDC) interviewed 24 experienced wildland firefighters and experts in the fire community using qualitative methodology (Glaser and Strauss 1967). A single question was the focus of all interviews: "How can firefighters avoid entrapment?" The interviews covered an amazing variety of topics, problems, and solutions. Based on the data, firefighter cohesion (how closely firefighters are tied together as a group, Driessen 2002) was identified as one important factor that can help reduce the chances of firefighters getting entrapped. Based on this observation, the MTDC project team began a new project in 2004 that focused on firefighter cohesion and entrapment avoidance. The "Firefighter Cohesion and Entrapment Avoidance" DVD you are about to view is the product of that project.

From 2004 to 2006, the firefighter cohesion project interviewed 49 experienced leaders of firefighters throughout the country. The leaders were each asked to share stories about times on a fire when they faced a cohesion problem and how they dealt with it to reduce the chance of entrapment. Their stories help preserve the oral tradition (sharing of wisdom) of experienced firefighters, bringing the abstract concept of "cohesion" and its connection to entrapment avoidance into the everyday work practices of firefighters.

he goal of this training DVD is to raise firefighters' awareness of the importance of cohesion and how cohesion can help firefighters avoid entrapment. To meet this goal, the video is designed to stimulate discussions.

Current leaders of firefighters or those who will become leaders are the primary audience for this program. However, other firefighters can benefit from viewing the program because they too have opportunities to promote cohesion among firefighters.



he program has three parts:

- Part I: Cohesion Among Firefighters— Leaders of firefighters describe what cohesion means to them in their everyday work.
- Part II: Links to Entrapment Avoidance— Leaders discuss the links between cohesion and entrapment avoidance.
- Part III: Eight Common Cohesion Problems on Fires—Eight common reoccurring cohesion problems are covered:
 - 1. Firefighters Not Getting Along
 - 2. Working With Unfamiliar Resources
 - The Fire Gets Hot and Firefighters Get Nervous
 - 4. Can't Trust Other Firefighters
 - 5. Resources Out of the Loop
 - 6. Questioning Tactics
 - 7. Lacking Local Knowledge
 - 8. Home Unit Loyalties and Cliques

The eight cohesion problems discussed in Part III are not all the possible firefighter cohesion problems. These are the problems the leaders who were interviewed talked about most often. In each of these sections, you'll hear stories from leaders about the work practices they used to take care of the cohesion problems they faced.

his DVD includes:

- These facilitator's notes
- Transcripts of the stories shown in the eight sections of Part III ("Firefighter Cohesion and Entrapment Avoidance: Story Transcripts")
- The discussion questions ("Firefighter Cohesion and Entrapment Avoidance: Discussion Questions").

These documents also are available at http://www. fs.fed.us/t-d/programs/fire/cohesion/ (Username: t-d, Password: t-d). Make copies of the transcripts of the stories from the sections you will be using on a given day. Print out the appropriate discussion questions. If you wish to have others help you facilitate the discussions, share this set of instructions (Firefighter Cohesion and Entrapment Avoidance: Facilitator's Notes) with them.

his DVD is **not** intended to be watched in a single sitting. The students should watch Parts I and II to learn about cohesion and how it relates to entrapment avoidance. Specific cohesion problems and ways of addressing them are included in Part III. Pick one of the eight sections and view all the stories from that section. Then select one of the stories to talk about using the discussion questions provided and listen to the story again. Often, when students listen a second time, they will hear things they hadn't noticed the first time. The more the students pay attention to these unremarkable little stories, the more they will find to discuss. Once you're finished discussing a story, go to the next story in the section.

them to look for the commonsense work practices leaders used to build, maintain, or restore cohesion. You may want to encourage students to jot down or underline the work practices in their transcripts while they are viewing the video. Also, ask students to be prepared to discuss how the leader's work practices could have reduced the chances of entrapment by increasing situational awareness and confidence in the leader.



Short Overview of Each Story

A

brief synopsis of each story is included to help facilitators consider the stories they may want to use during their training.

Problem 1: Firefighters Not Getting Along

Story 1: Out To Compete With Everybody

This story from a hotshot superintendent discusses how he resolved a problem caused by a hotshot crew that was trying to show everybody else up.

Story 2: The Excitement Is Gone

In this story, a crew boss discusses two crewmembers who were complaining because they were bored while mopping up. The leader saw these two firefighters causing a cohesion problem.

Story 3: He Didn't Get To Be Crew Boss

This story is from a crew boss trainee who faced a cohesion problem caused by a jealous squad boss.

Problem 2: Working With Unfamiliar Resources

Story 1: Grab People Off Districts

In this story, a crew boss discusses when he put together a type II crew and built cohesion among firefighters who came from different districts.

Story 2: Resources I Hadn't Worked With Before

In this story, a strike team leader discusses how he built cohesion when he was assigned several engines he had never worked with before.

Story 3: Crew Straggling In

In this story, the incident commander of a type 4 fire discusses when he called for an additional crew to help fight the fire. He had to tie these new firefighters into an existing crew.

Story 4: They Welcomed Us In

In this story, a contract crew leader talks about not being given a chance to build cohesion with federal firefighters. He explains how a smokejumper in charge brought a federal crew and a contract crew together.

Problem 3: The Fire Gets Hot and Firefighters Get Nervous

Story 1: The Fire Was Really Picking Up

In this story, a crew boss discusses how he kept his crew cohesive when the fire picked up.

Story 2: We Had People in a Panic

In this story, a helibase manager discusses moving a large number of firefighters and equipment quickly and cohesively from a helispot that was threatened with a burnover.

Story 3: We Have Spots All Over the Place

In this story, a squad boss describes how he kept his squad together when a fire blew up.

Problem 4: Can't Trust Other Firefighters

Story 1: This Person Was Dangerous

In this story, a hotshot superintendent discusses a person on his crew he couldn't trust. The firefighter was too aggressive and didn't follow orders—posing a danger both to himself and to the crew.

Story 2: We Have Spot Fires Behind Us

In this story, a hotshot superintendent discusses his distrust of another crew because they weren't watching his crew's back.



Problem 5: Resources Out of the Loop

Story 1: They Felt Isolated

In this story, a federal firefighter describes when he had to integrate a group of structural firefighters into the larger firefighting operation after they found themselves out of the loop.

Story 2: He Was Freelancing

In this story, a division supervisor discusses how she responded when a dozer operator was out of the loop and the fire was picking up.

Problem 6: Questioning Tactics

Story 1: We're Not Going

This story from a strike team leader discusses three type II crews who were working for her on a fire. One of the crew bosses refused to send his crew into an area he thought was dangerous and the strike team leader had to build cohesion with the crew boss.

Story 2: Should We Be Here?

In this story, a dozer boss discusses building cohesion with a dozer operator after the operator questioned whether it was safe to engage the fire.

Problem 7: Lacking Local Knowledge

Story 1: Out of Their Element

In this story, a leader discusses building cohesion with a hotshot crew that didn't have experience with range fires.

Story 2: You're on People's Turf

In this story, a leader who was assigned to be an IC in a part of the country where he didn't have experience explains how he integrated himself into the local resources to create cohesion.

Problem 8: Home Unit Loyalties and Cliques

Story 1: Best Friends

In this story, a crew boss discusses dealing with three best friends on his crew who were troublemakers causing cohesion problems.

Story 2: We Needed To Bring Them Together

In this story, a crew boss trainee discusses how he built a cohesive crew from several district crews that had their own leaders and unit loyalties.



After Viewing Stories in a Section

What Students Should Get From the Program

iscussion questions are provided for each story.
These questions are intended to help students get more out of the story. The questions also are designed to get students talking about moments on fires when they (or other leaders) had problems with cohesion and how they dealt with it.

Students should be reminded that the discussion is not about whether the leader made the right decision or solved the specific cohesion problem the right way. This program is not about rule-governed practices students should necessarily follow if they face one of these cohesion problems on a fire. Instead, the discussion is to help students consider work practices they might use, depending on whether or not the practices fit their immediate situation.

fter viewing the program, students should better understand the importance of cohesion and its role in helping avoid entrapment. In addition, students should be more aware when they are facing a cohesion problem on a fire. This recognition should trigger what Gary Klein (2001) refers to as a "recognition primed decision" moment. These recognizable moments will help leaders realize they need to make a decision and take action.

Leaders who have watched this program might be able to use some of the work practices discussed in these stories. However, leaders will have to assess their immediate situation before choosing the work practice that will work best for them.

Linking This Program to Formal Leadership Training

acilitators of the "Wildland Fire Leadership Development Program" can use stories from the "Firefighter Cohesion and Entrapment Avoidance" program as they help train leaders of wildland firefighters. These stories can help students see how formal leadership concepts apply in the world of wildland firefighting, especially when leaders face problems of cohesion and entrapment avoidance.

After students listen to each story, it is important for them to answer the questions in the program to improve their understanding of cohesion and entrapment avoidance. The facilitator can ask students to discuss related formal leadership concepts. To help facilitators, some links between the stories and the formal leadership topics are provided. These links were drawn from "Leading in the Wildland Fire Service" (LWFS, PMS 494-2 or NFES 2889) and the "Incident Response Pocket Guide" (IRPG PMS 461 or NFES 1077). Facilitators may find additional leadership concepts in the stories that students can discuss.

During discussions, facilitators should encourage students to look into the stories themselves to see how cohesion and the formal leadership concepts have applied during their experiences on fires.



Problem 1: Firefighters Not Getting Along

Story 1: Out To Compete With Everybody

- Command Climate—Communication (LWFS p. 22)
- Building the Team—Healthy Conflict (LWFS p. 53)
- Distraction from Primary Duty—Conflict (IRPG p. x)

Story 2: The Excitement Is Gone

- Respect—Know your subordinates and look out for their well-being—Resolve conflicts between individuals on the team (IRPG p. vii)
- Employing Our People in Accordance with Their Capabilities—Discipline (LWFS p. 58)
- Building the Team—Team Results (LWFS p. 54)
- Building the Team—Trust (LWFS p. 53)
- Distraction from Primary Duty—Conflict (IRPG p. x)

Story 3: He Didn't Get To Be Crew Boss

- Employing Our People in Accordance with Their Capabilities—Aligning Values (LWFS p. 56)
- Command Climate (LWFS p. 19)
- Respect—Know your subordinates and look out for their well-being—Resolve conflicts between individuals on the team (IRPG p. vii)
- Distraction from Primary Duty—Conflict (IRPG p. x)

Problem 2: Working With Unfamiliar Resources

Story 1: Grab People Off Districts

- Wildland Fire: A High-Risk Operational Environment (LWFS p.10, refer to p. 13 "Rapidly Assembled Temporary Teams")
- Building the Team (LWFS p. 52–53)
- Communication Responsibilities (IRPG p. ix)
- Command Climate—Communication (LWFS p. 22)

Story 2: Resources I Hadn't Worked With Before

- Employing Our People in Accordance with Their Capabilities (LWFS p. 56; IRPG p. vii)
- Ensuring Tasks are Understood, Supervised, and Accomplished—Leader's Intent (LWFS p. 33)

Story 3: Crew Straggling In

- Wildland Fire: A High-Risk Operational Environment (LWFS p. 10, refer to p. 13 "Rapidly Assembled Temporary Teams")
- Communication Responsibilities (IRPG p. ix)
- Building the Team—Introduction (LWFS p. 52)

Story 4: They Welcomed Us In

- Wildland Fire: A High-Risk Operational Environment (LWFS p. 10, refer to p. 13 "Rapidly Assembled Temporary Teams")
- Communication Responsibilities (IRPG p. ix)
- Building the Team—Commitment (LWFS p. 53)

Problem 3: The Fire Gets Hot and Firefighters Get Nervous

Story 1: The Fire Was Really Picking Up

- Keeping Our People Informed (LWFS p. 50)
- Making Sound and Timely Decisions—Situation Awareness Cycle (LWFS p. 31)
- Building the Team—Trust (LWFS p. 53)
- Knowing Our People and Looking Out for Their Well-Being (LWFS p. 45)

Story 2: We Had People in a Panic

- Command Climate—Command Presence (LWFS p. 20)
- Employing Our People in Accordance with Their Capabilities (LWFS p. 56)

Story 3: We Have Spots All Over the Place

- Knowing Our People and Looking Out for Their Well-Being—Leading Up (LWFS p. 48)
- Know your subordinates and look out for their well-being—Put the safety of your subordinates above all other objectives (IRPG p. vii)
- Keeping Our People Informed (LWFS p. 50)
- Employ your subordinates in accordance with their capabilities—Observe human behavior as well as fire behavior (IRPG p. vii)
- Knowing Our People and Looking Out for Their Well-Being—Stress/Fear (LWFS p. 47–48)

Problem 4: Can't Trust Other Firefighters

Story 1: This Person Was Dangerous

- Building the Team—Trust (LWFS p. 53)
- Command Climate—Command Presence (LWFS p. 20)
- Employing Our People in Accordance with Their Capabilities—Discipline (LWFS p. 58)

Story 2: We Had Spot Fires Behind Us

- Building the Team—Trust (LWFS p. 53)
- Knowing Our People and Looking Out for Their Well-Being—Leading Up (LWFS p. 48)
- Making Sound and Timely Decisions—Situation Awareness Cycle (LWFS p. 31)

Problem 5: Resources Out of the Loop

Story 1: They Felt Isolated

- Keeping Our People Informed—Five Communication Responsibilities (LWFS p. 50)
- Building the Team—Trust (LWFS p. 53)
- Making Sound and Timely Decisions—Situation Awareness Cycle (LWFS p. 31)

Story 2: He Was Freelancing

- Know your subordinates and look out for their well-being—Put the safety of your subordinates above all other objectives (IRPG p. vii)
- Command Climate (LWFS p. 19)
- Command Climate—Command Presence (LWFS p. 20)
- Employing Our People in Accordance with Their Capabilities—Performance Feedback (LWFS p. 57)
- After Action Reviews—(LWFS p. 42 and IRPG p. 19)

Problem 6: Questioning Tactics

Story 1: We're Not Going

- Command Climate (LWFS p. 19)
- Knowing Our People and Looking Out for Their Well-Being—Fear (LWFS p. 48)
- Ensuring Tasks are Understood, Supervised, and Accomplished—Situational Leadership (LWFS p. 38)

Story 2: Should We Be Here?

- Building the Team—Trust (LWFS p. 53)
- Knowing Our People and Looking Out for Their Well-Being—Our First Priority: Life and Safety (LWFS p. 46)
- Knowing Our People and Looking Out for Their Well-Being—Fear (LWFS p. 48)
- Ensuring Tasks are Understood, Supervised, and Accomplished—Situational Leadership (LWFS p. 38)



Problem 7: Lacking Local Knowledge

Story 1: Out of Their Element

- Low Experience Level with Local Factors (IRPG p. x)
- Ensuring Tasks are Understood, Supervised, and Accomplished—Situational Leadership (LWFS p. 38)
- Keeping Our People Informed—Situational Communication (LWFS p. 51)
- Employing Our People in Accordance with Their Capabilities (LWFS p. 56)
- Wildland Fire: A High-Risk Operational Environment (LWFS p.10, refer to p. 13 "Rapidly Assembled Temporary Teams")

Story 2: You're on People's Turf

- Low Experience Level with Local Factors (IRPG p. x)
- Ensuring Tasks are Understood, Supervised, and Accomplished—Situational Leadership (LWFS p. 38)
- Knowing Ourselves and Seeking Improvement (LWFS p. 59)

Problem 8: Home Unit Loyalties And Cliques

Story 1: Best Friends

- Distraction from Primary Duty—Conflict (IRPG p. x)
- Employing Our People in Accordance with Their Capabilities—Discipline (LWFS p. 58)

Story 2: We Needed To Bring Them Together

• Building the Team—Introduction (LWFS p. 52)

References

Driessen, Jon. 1996. Making a crew. Video, parts 1 and 2, 9567-1V01-MTDC and 9667-1V02-MTDC. Missoula, MT: United States Department of Agriculture Forest Service, Missoula Technology Development Center. Order by calling 406-329-3978.

Driessen, Jon. 2002. Crew cohesion, wildland fire transitions, and fatalities. Tech. Rep. 0251-2809-MTDC. Missoula, MT: U.S Department of Agriculture Forest Service, Missoula Technology and Development Center. Available at http://www.fs.fed.us/t-d/ (Username: t-d, Password: t-d).

Glasner, Barry; Strauss, A. 1967. The discovery of grounded theory. Chicago: Aldine.

Klein, Gary. 2001. Sources of Power. London: MIT Press.



About the Authors

Leslie Anderson is the Program Leader for the Fire and Aviation Program at the Missoula Technology & Development Center (MTDC). Leslie has a bachelor's degree in forestry from the University of California, Berkeley, and a master's degree in forestry from the University of Montana. She began working in wildland fire in 1979. Leslie was a smokejumper from 1984 to 1989 in Missoula, MT. She worked for 2 years in fire management with the Costa Rican National Park Service as a Peace Corps volunteer from 1989 to 1991. Leslie worked as an assistant district fire management officer on the Bitterroot National Forest from 1992 to 1997 before coming to MTDC as an equipment specialist in 1997. She served as a project leader for projects involving fire shelters and fire-resistant clothing before becoming a program leader.

Lisa Outka-Perkins received her master's degree in sociology with an emphasis in criminology from the University of Montana in 2001. She works for MTDC as a sociologist and project leader. Her most recent publication is "Volunteers in the Forest Service: A Coordinator's Desk Guide." Her most recent DVD projects include: "Personal Safety in Remote Work Locations," "Wilderness Rangers: Keeping it Wild," "Building Mountain Bike Trails: Sustainable Singletrack," "Collecting Fees in the Field: Mitigating Dangers," and "Working Along the United States-Mexico Border."

Jon Driessen received his Ph.D. in sociology from the University of Colorado in 1969. Currently he is professor emeritus from the University of Montana, retiring after 34 years of service. Since 1977, he also has worked as a faculty affiliate at the Missoula Technology and Development Center. His most recent project has been the production of the Forest Service training program, Personal Safety in Remote Locations. He was also Project Leader for several other training programs, including Making a Crew, Driving Mountain Roads, and Focus on the Mission. He is currently working on an entrapment avoidance project for firefighters.

Theron Miller received his Ph.D. in Forestry from the University of Montana in 1997 with an emphasis in natural resources social science. After graduating he was a research and teaching professor at The University of Montana where his area of focus was in applied social sciences directly related to management of natural resources on public lands. Theron joined MTDC in 2006 and is assisting with projects in Safety and Health, Recreation, and Fire and Aviation Management.

Library Card

Anderson, Leslie; Outka-Perkins, Lisa; Driessen, Jon; Miller, Theron. 2009. Firefighter cohesion and entrapment avoidance: facilitator's notes. Tech. Rep. 0951-2807-MTDC. Missoula, MT: U.S. Department of Agriculture Forest Service, Missoula Technology and Development Center. 14 p.

This report provides information for facilitators who will be using the DVD "Firefighter Cohesion and Entrapment Avoidance" during training. The DVD was created by the Missoula Technology and Development Center based on interviews with 49 experienced leaders of firefighters. The DVD's goal is to increase firefighters' awareness of cohesion (how closely firefighters are tied together as a group) and its importance in helping wildland firefighters avoid entrapment. The DVD includes facilitator's notes, transcripts of the firefighter's stories, and discussion questions.

Keywords: burnovers, deployments, safety at work, training, wildland firefighting

For additional information about firefighter cohesion, Electronic copies of MTDC's documents are available on contact Lisa Outka-Perkins at MTDC:

USDA Forest Service Missoula Technology and Development Center

5785 Hwy. 10 West

Missoula, MT 59808-9361

Phone: 406-329-3849 Fax: 406-329-3719

E-mail: loutkaperkins@fs.fed.us

the Internet at:

http://www.fs.fed.us/eng/t-d.php

Forest Service and Bureau of Land Management employees can search a more complete collection of MTDC's documents, CDs, DVDs, and videos on their internal computer networks at:

http://fsweb.mtdc.wo.fs.fed.us/search/

