

The Investigation Team

Within hours of the incident an interagency team was being formed and the Occupational Safety and Health Administration was notified due to the fatalities of the federal workers. Jim Furnish, Deputy Chief for National Forest Systems, was designated investigation team leader. The investigation team first met in Twisp, WA on the evening of Wednesday, July 11.

The team investigated the fire and fatality site, and conducted interviews with people associated with the event. The team met daily in the morning and evening to discuss progress, review assignments, coordinate activities, review their findings, and document their work. The team adjourned July 23 with the bulk of the investigation and analysis done. Compilation and further refinement of the draft investigation report continued for the next few weeks, and the completed draft report was issued to the Management Review Board on August 23, 2001.

Thirtymile Fire Investigation Team Members

Team Leader	Jim Furnish USFS National Headquarters Washington, DC
Chief Investigator	Alan Chockie Link Technologies Seattle, WA
Equipment Specialist	Leslie Anderson USFS Missoula Technology & Development Center Missoula, MT
Line Officer Representative	Kent Connaughton USFS Pacific Southwest Region Vallejo, CA
Fire Operations	Dave Dash BLM-Alaska Fire Service Fort Wainwright, AK
Union Representative	Joe Duran USFS Los Padres National Forest Santa Maria, CA
Weather Specialist	Brenda Graham USFS Northern California Service Center Redding, CA
Equipment Specialist	George Jackson USFS Missoula Technology & Development Center Missoula, MT
Human Factors	Tony Kern USFS National Interagency Fire Center Boise, ID
Fire Behavior	Rich Lasko USFS Northern Region Missoula, MT
Weather Specialist	Jim Prange National Weather Service Seattle, WA
Operations	Jeanne Pincha-Tulley USFS Tahoe National Forest Nevada City, CA
Safety Manager	Chuck Whitlock USFS Missoula Technology & Development Center Missoula, MT

Thirtymile Fire Investigation Supporting Personnel

Logistics	Arnie Brosten USFS Flathead National Forest Swan Lake Ranger District Big Fork, MT
Photographer /Videographer	Ben Croft USFS Missoula Technology & Development Center Missoula, MT
Okanogan- Wenatchee Liaison	Troy Corn USFS Okanogan-Wenatchee National Forests Entiat Ranger District Entiat, WA
Information Officer	Ron DeHart USFS Mt Baker-Snoqualmie National Forest Mountlake Terrace, WA
Sociologist	John Driesen USFS Missoula Technology & Development Center Missoula, MT
Fire Behavior	Mark Finney USFS Rocky Mountain Research Station - Fire Science Laboratory Missoula, MT
GPS/GIS	Ron Gross USFS Okanogan-Wenatchee National Forests Twisp, WA
Fire Behavior	Tom Leuschen USFS Okanogan-Wenatchee National Forests Twisp, WA
Transcriptions	Gary Maddux USFS Tahoe National Forest Nevada City, CA
Law Enforcement Liaison	Bill McConnell USFS Colville National Forest Colville, WA
Documentation	Shari Miller USFS Okanogan-Wenatchee National Forests Wenatchee, WA
Documentation	Esther Woodward USFS Okanogan-Wenatchee National Forests Okanogan, WA



United States
Department of
Agriculture

Forest
Service

Washington Office

14th & Independence SW
P.O. Box 96090
Washington, DC 20090-6090

File Code: 6730
Route To:

Date: JUL 11 2001

Subject: Thirtymile Fire Fatalities Investigation

To: Jim Furnish, Investigation Team Leader

The Accident Investigation Team, being led by you, including a core team, technical specialists, and other necessary support staff, is delegated the authority to conduct an investigation of the fatalities and injuries that occurred during the entrapment and shelter deployment on the Thirtymile Fire, Okanogan National Forest, WA.

The Team shall:

1. Organize, conduct, and control the accident investigation;
2. Coordinate information exchange among team members, local Law Enforcement, coroner, etc.;
3. Maintain liaison with affected units;
4. Approve requests and allocate funding for necessary resources;
5. Report preliminary findings or other facts, as they become known, to the Chief on an on-going basis;
6. Furnish to the Chief all reports as outlined in the Accident Investigation Guide (6700 Safety and Health April 2001-0167-2825-MTDC);
7. Through a thorough analysis of accident sequence, human factors, and environmental factors determine:
 - a. Direct causal factor(s) of fatalities;
 - b. Contributing factor(s) surrounding the accident;
8. Adhere to the Information Flow Chart (enclosed);
9. The primary contact for the Office of Communication is Joe Walsh.

A separate Management Review Team will be appointed to review the accident reports and to develop proposed corrective actions that should be implemented to eliminate future accidents of this nature.

DALE N. BOSWORTH
Chief

Enclosure



Thirtymile Fire Investigation	
<i>List of Individuals Interviewed & Contacted for Information</i>	
Name	Position
Dewane Anderson	NWR #6, Squad 3 Member
Bill Austin	Goat Peak Lookout
Armando Avila	NWR #6, Squad 2 Member
Mort Banasky	First Butte Lookout
Gary Bennett	Fire Weather Program Leader, Spokane National Weather Service
John Birks	Squad Boss, Entiat IHC
Marshall Brown	Superintendent, Entiat IHC
Kyle Cannon	Assistant Superintendent, Entiat IHC
Beau Clark	NWR #6, Squad 1 Member
Ellreese Daniels	NWR #6, Crew Boss Trainer
Nick Dreis	NWR #6, Squad 2 Member
Harry Dunn	Supervisor, Engine #701
Sally Estes	Dispatch Coordinator, Okanogan National Forest
Jason Emhoff	NWR #6, Squad 1 Member
Barry George	AFMO, Methow Valley Ranger District
Bruce Hagemeyer	Civilian
Paula Hagemeyer	Civilian
Lyle Hammer	Meteorologist, Spokane National Weather Service
Emily Hinson	NWR #6, Squad 3 Member
Elaine Hurd	NWR #6, Squad 2 Member
Gabe Jasso	AFMO, Lake Wenatchee Ranger District
Pete Kampen	NWR #6, Crew Boss Trainee
Dave Laughman	Engine #704 Driver
George Marcott	District FMO, Naches Ranger District
Eric Nichols	Firefighter (Timber)
John Newcom	District Ranger, Methow Valley Ranger District
Sonny O'Neal	Forest Supervisor, Okanogan-Wenatchee National Forests
Michael Pipgras	Member Entiat IHC
Alan Quan	Deputy Forest Supervisor, Okanogan-Wenatchee National Forests
Gary Reed	Dispatcher, Okanogan National Forest
Matthew Rutman	NWR #6, Squad 2 Member
Pete Soderquist	District FMO, Methow Valley Ranger District
Tim Schmekel	Engine #701 Assistant Supervisor
Scott Scherzinger	NWR #6, Squad 1 Member
Brian Schexnayder	NWR #6, Squad 3, Squad Boss
Ron Smith	Pilot, Single Engine Air Tanker (SEAT)
Jamie Tackman	Lead Plane Pilot, Libby South Fire
Jodie Tate	NWR #6, Squad 3 Member
Thom Taylor	NWR #6, Squad 2, Squad Boss
Elton Thomas	Forest FMO, Okanogan-Wenatchee National Forests
Marshall Wallace	NWR #6, Squad 3 Member
Roger Wallace	District FMO, Lake Wenatchee & Leavenworth Ranger Districts
Paul Walters	Pilot, Helicopter 3913N
Donica Watson	NWR #6, Squad 3 Member
Rebecca Welch	NWR #6, Squad 1 Member

Incident Time Line

Event	Time/Date	Response Actions
<p>Untended campfire ignites a fire along the Chewuch River</p> <p>Fire reported by Canadian Lead Plane (9:26 p.m.)</p>	<p>July 9 ,2001</p> <p>— 9:00 p.m. —</p> <p>— 10:00 p.m. —</p> <p>— 11:00 p.m. —</p>	<p>3-Person hand crew en route to fire (10:04 p.m.)</p> <p>Engine #704 en route to fire (10:45 p.m.)</p> <p>3-Person hand crew arrives at fire (~11 p.m.)</p>
<p>Fire size estimated 3 to 8 acres in heavy timber with 2-4 foot flame lengths (11:08 p.m.)</p> <p>10-person crew and 2 engines requested (11:08 p.m.)</p> <p>Fire investigator and Type 3 or 4 IC requested (11:22 p.m.)</p> <p>Fire size estimated 20-25 acres & "it will grow tonight, will not hold, will hit slope and get larger" (11:59 p.m.)</p>	<p>— 12:00 a.m. —</p>	<p>Entiat IHC & Mark III pump assigned to the fire (11:11 p.m.)</p> <p>Engine #704 arrives at fire (11:49 p.m.)</p>
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<p>NWR #6 crew assigned to Libby South fire (~12:00 a.m.)</p> <p>Fire "slopped over river" (12:10 a.m.)</p>	<p>July 10, 2001</p> <p>— 1:00 a.m. —</p>	<p>NWR #6 crew contacted to meet in Twisp, WA at 7:00 a.m.</p>
<p>Entiat IHC releases Engine #704, 3-person hand crew & 2 person chase truck (~1:30 a.m.)</p> <p>Fire line completed from road to west side of river (1:48 a.m.)</p>		<p>Entiat IHC and 2-person chase truck arrive at fire (~1:00 a.m.)</p> <p>Engine #704, 3-person hand crew & 2-person chase truck depart the fire (1:30 a.m.)</p> <p>Plan of attack is to go east of river and find and line spots (~1:30 a.m.)</p>

Event	Time/Date	Response Actions
<p>2 spots contained (2:15 a.m.)</p> <p>Crew and helicopter ordered for morning arrival (2:15 a.m.)</p> <p>2 Mark III pumps with kits, hose, wyes, nozzles, reducers ordered (2:15 a.m.)</p>	<p>— 2:00 a.m. —</p>	<p>Entiat IHC move to east side of river (2:15 a.m.)</p>
	<p>— 3:00 a.m. —</p>	<p>NWR #6 crew assembles in Leavenworth, WA (3:30 a.m.)</p>
	<p>— 4:00 a.m. —</p>	
	<p>— 5:00 a.m. —</p>	
<p>Dispatch requested information on type of aircraft needed (5:26 a.m.)</p> <p>Seven spots covering a total of 5 to 6 acres - five spots lined (5:26 a.m.)</p>	<p>— 6:00 a.m. —</p>	<p>Confirmed Helicopter 13N (Type III with bucket and long line) to be available at NCSB at 10 a.m. (5:26 a.m.)</p> <p>Entiat move to west side of river for rest and food (~5:30 a.m.)</p>
<p>About 1.5 acres lined (6:26 a.m.)</p>	<p>— 7:00 a.m. —</p>	<p>Entiat IHC return to fire on east side of river (6:26 a.m.)</p>
<p>NWR #6 arrives at Twisp Ranger Station (~7:00 a.m.)</p>	<p>— 8:00 a.m. —</p>	<p>Briefing -- NWR #6 notified they would be mopping up "a small fire" (~7:00 a.m.)</p>
<p>NWR #6, District FMO, and Forest FMO depart for the fire (7:51 a.m.)</p>	<p>— 9:00 a.m. —</p>	
<p>Fire status assessment completed (~9:45 a.m.)</p>	<p>— 10:00 a.m. —</p>	<p>NWR #6, District FMO, and Forest FMO arrived at the fire (9:04 a.m.)</p> <p>NWR #6 Crew Boss assumes IC (9:30 a.m.)</p>
<p>NWR #6 Crew Boss Trainee completes crew briefing (~10:30 a.m.)</p>		<p>Plan is to put in "pump show, line, and mop up the fire"</p>

Event	Time/Date	Response Actions
<p>Forest FMO orders another crew (10:40 a.m.)</p>		
<p>District FMO orders barricade to close the road</p>		
<p>Pumps and hoses set up (~11:00 a.m.)</p>	<p>— 11:00 a. m. —</p>	<p>NWR #6 crew began working the fire on west and east side of the river (~11:00 a.m.)</p>
<p>Entiat IHC go to bed down at campground (~11:00 a.m.)</p>		
<p>From 11:00 a.m. to 12:00 p.m.</p> <ul style="list-style-type: none"> • Some hoses burst • Trouble keeping pumps running • Four pulaskis break 		
<p>Dispatch notifies IC that Helicopter 13N available at NCSB (11:52 a.m.)</p>	<p>— 12:00 p.m. —</p>	
		<p>NWR #6 tactics changed to digging line (~12:00 p.m.)</p> <p>IC requests launch of Helicopter 13N (12:08 p.m.)</p>
<p>IC checks on arrival of Helicopter 13N and orders "1 or 2 more crews"(12:30 p.m.)</p>		
<p>Dispatch unable to contact Entiat IHC (12:49 p.m.)</p>		<p>Air Attack diverted from Libby South Fire to Thirtymile Fire (12:40 p.m.)</p>
	<p>— 1:00 p.m. —</p>	<p>NWR #6 crewmember sent to wake Entiat IHC (~1:00 p.m.)</p>
<p>Two civilians drive past the fire and crew toward the Thirtymile campground (~1:00 p.m.)</p> <p>Air Attack arrives at fire (~1:11 p.m.)</p>		<p>Air Attack orders SEAT (1:15 p.m.)</p>
<p>IC repeats order for 2 additional crews (1:43 p.m.)</p>		

Event	Time/Date	Response Actions
Approval to launch Helicopter 13N (2:00 p.m.)	— 2:00 p.m. —	Entiat IHC arrive at fire (~2:00 p.m.)
Engines #701 and #704 drive past crews looking for spotting (~3:30 p.m.)	— 3:00 p.m. —	Helicopter 13N departs from 8-Mile Camp to begin making water drops (2:38 p.m.)
First Butte Lookout reports the fire is forming its own thunderhead (4:03 p.m.)	— 4:00 p.m. —	NWR #6 pulled back to lunch site on west side of river (3:00 p.m.)
Fire burns across the road entrapping Squads 1 & 2 (4:34 p.m.)	— 4:00 p.m. —	NWR #6 Squad 1 called up the road to support Engine #701 (~4:00 p.m.)
2 civilian campers arrive from the Thirtymile Camp site (~5:10 p.m.)	— 5:00 p.m. —	NWR #6 Squad 2 called up to support Engine #701 (~4:20 p.m.)
Column of fire reaches the deployment site (5:24 p.m.)	— 5:00 p.m. —	NWR #6 Squad 3 arrives at Engine #704 and immediately retreats toward lunch site (~4:34 p.m.)
Firestorm moves beyond the deployment site	— 5:00 p.m. —	NWR #6 Squads 1 & 2 load in van and drive 1 mile up the road toward a deployment site
At least 2 injured and 4 unaccounted for (5:48 p.m.)	— 6:00 p.m. —	Shelters deployed (5:24 p.m.): <ul style="list-style-type: none"> • 10 people on the road • 6 people on the rock slope 2 crewmembers on the rock slope leave their shelters - 1 to the river and 1 to the van
	— 6:00 p.m. —	10 people on the road move to the river
	— 6:00 p.m. —	People move from the river to the sandbar (~5:50 p.m.)
	— 6:00 p.m. —	Entiat IHC, NWR #6 Crew Boss Trainee arrive and begin to administer first aid (~6:00 p.m.)
	— 6:00 p.m. —	NWR #6 crew and civilians given medical treatment and evacuated