

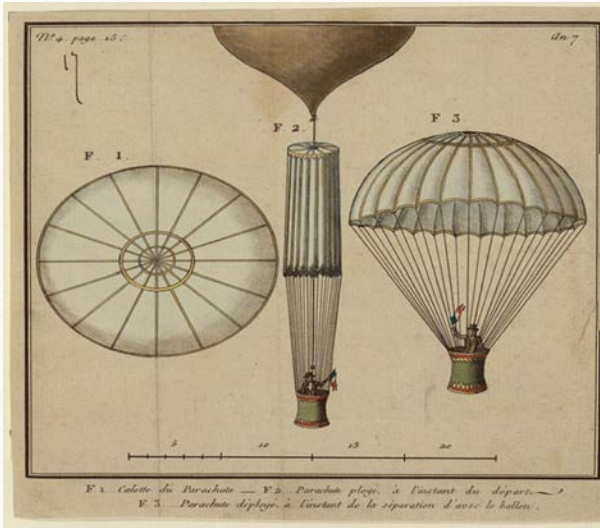
# HISTORY OF SMOKEJUMPING

By Fred Cooper

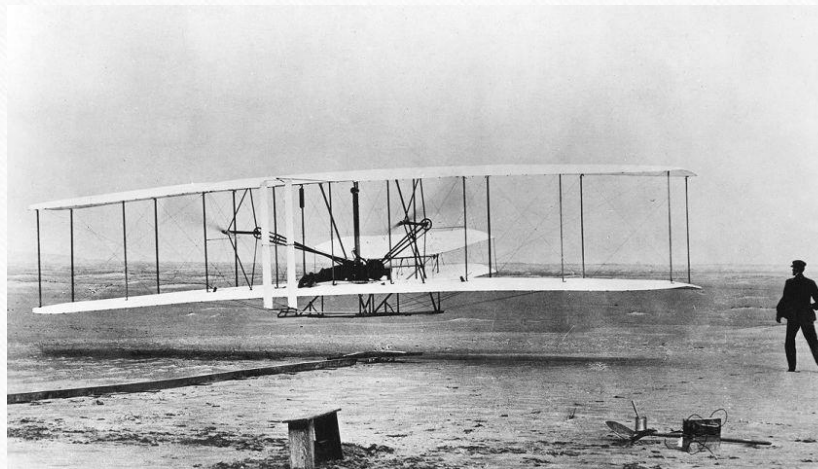


# Smokejumper Requirements

## Parachute + Airplane + Physical



1797



1903

### Smokejumper Quals

- Firefighting Experience
- 21-25 Years of Age
- Good Physical Condition
- Single Male
- Pay -- \$195 per month

1940

# FOREST SERVICE HISTORICAL USE OF AIRPLANES & PARACHUTES

- 1909 - Forest Ranger saw a Wright plane -- wrote report suggesting its use but nothing happened
- 1915 - First use of airplane for Aerial Fire Patrol (Wisconsin) – Curtis Flying Boat
- 1919 & 1920 - U.S. Army Air Service & Forest Service joint Fire Patrols; Army funded. A great partnership.
- 1921 - Army reductions after WWI, funding unavailable
- 1920's & 1930's
  - Fire Patrol & Scouting financed locally
  - Emergency Landing Fields
  - Cargo Dropping - freefall & via parachute starting 1929
  - Aerial Photography
  - FS Resource Mgmt.

# Aerial Fire Patrol



1920 Air Patrol – Curtiss JN 4D “Jenny’s”  
“Flying Coffins”



1925 Air Patrol – Mechanics and a Pilot  
“3 Mechanics per pilot”

# Forest Fire Patrol in Western Montana & Northern Idaho

1924

**AIR FIRE PATROL  
MAY START JUNE 21**

Howard Flint and H. J. Jost  
Again to Be Observers  
On Flights.

Airplane fire patrol over Western Montana and Idaho forests probably will not be started until June 21, Howard Flint, Forest Service fire chief said yesterday. Mr. Flint and H. J. Jost will be the observers.

Both of the observers are veterans of the air as far as forest patrol is concerned. This will be Mr. Flint's sixth season as an observer, and he now has more than 500 hours of flying. Jost is starting his third season.

1928

**HOWARD FLINT, MISSOULA FOREST SERVICE  
OFFICIAL, HAS NARROW ESCAPE IN CRASH**

Observer in Fire Patrol Plane, Forced to Land  
When Engine Quits. No Chance to Use Parachute in Territory. Not Seriously Injured.

Spokane, Wash., July 11.—(P)—Lieutenant Jack Rose and District Fire Chief Howard Flint, whose plane was forced down in the timber of Northern Idaho during a forest patrol yesterday, walked into a logging camp near St. Joe, Idaho, late today badly bruised, but otherwise all right, reports received here said.

The reports, which were brief, implied that the flyers, after being forced down into thick woods when their gasoline supply ran out, walked all night through the timber to the logging camp.

Their plane was damaged, Spokane aviators reported, after circling over it in the hope of finding the men. They added that no plane could make a successful landing within 25 miles of the place where the forest patrol plane came down.

Rescue parties had feared that both Rose and Flint were seriously hurt or killed, because of the apparent peril of their landing, made among tall trees and in an inaccessible country where wild animals abound.

**REPORT SENT HERE.**

**AMELIA EARHART  
AMERICA**

Tells How It Feels to Fly to  
Hours Did Not Seem Long,  
From Being Hungry, She Said

New York, July 11.—(P)—It does Europe by plane than to go any place first woman transatlantic passenger.

# AIRPLANE & PARACHUTE BARNSTORMING

## The Daredevils paved the way – 1920's and 1930's



SUNDAY MORNING, JULY 21, 1935.

### FLIGHT ACROSS CITY WILL OPEN AIRPORT SHOW

Novel and Daring Contests Will Be Put On This Afternoon

One of the greatest aggregations of aerial performers ever assembled in Utah is present for the Pioneer Days air circus, beginning at two p. m. today at Ogden airport.

The day's program includes 14 regular events plus numerous special stunts varying from an upside down flying exhibition by Bernardine Lewis King, Hollywood, to a transfer from an automobile to plane while both are traveling at 65 miles per hour, by Mickey "Bat Wings" Efferson, Wilmington, Del., parachute jumper.

#### REGULAR EVENTS

The 14 regular events will be run off in the following order:

1. Mass flight over Ogden by the Pacific coast army air squadron of pursuit planes and bombers.
2. Exhibition of the slow roll and upside down flying by three airplanes.
3. Light plane hurdle race, with trophy offered to winner by Utah Air Travel club.
4. Sky writing by Jimmie Lund, Pacific coast pilot.
5. Amateur parachute jumps, featuring local contestants.
6. Balloon breaking contest, with silver trophy offered by Utah Air Travel club.
7. Human free fall race to ground between Buddy Bruce, Hollywood stunt ace, and Mickey Efferson.
8. Bombing contest, with silver trophy by Utah Air Travel club, plus cash prizes totaling \$25.
9. Flight of old biplane.

### Will Risk Lives In Airport Exhibition This Afternoon



# HOT AIR BALLOONS

OBJECTIVE – Get Firefighters to Fires ASAP

February 1932

From: Goodyear-Zeppelin, Akron, Ohio

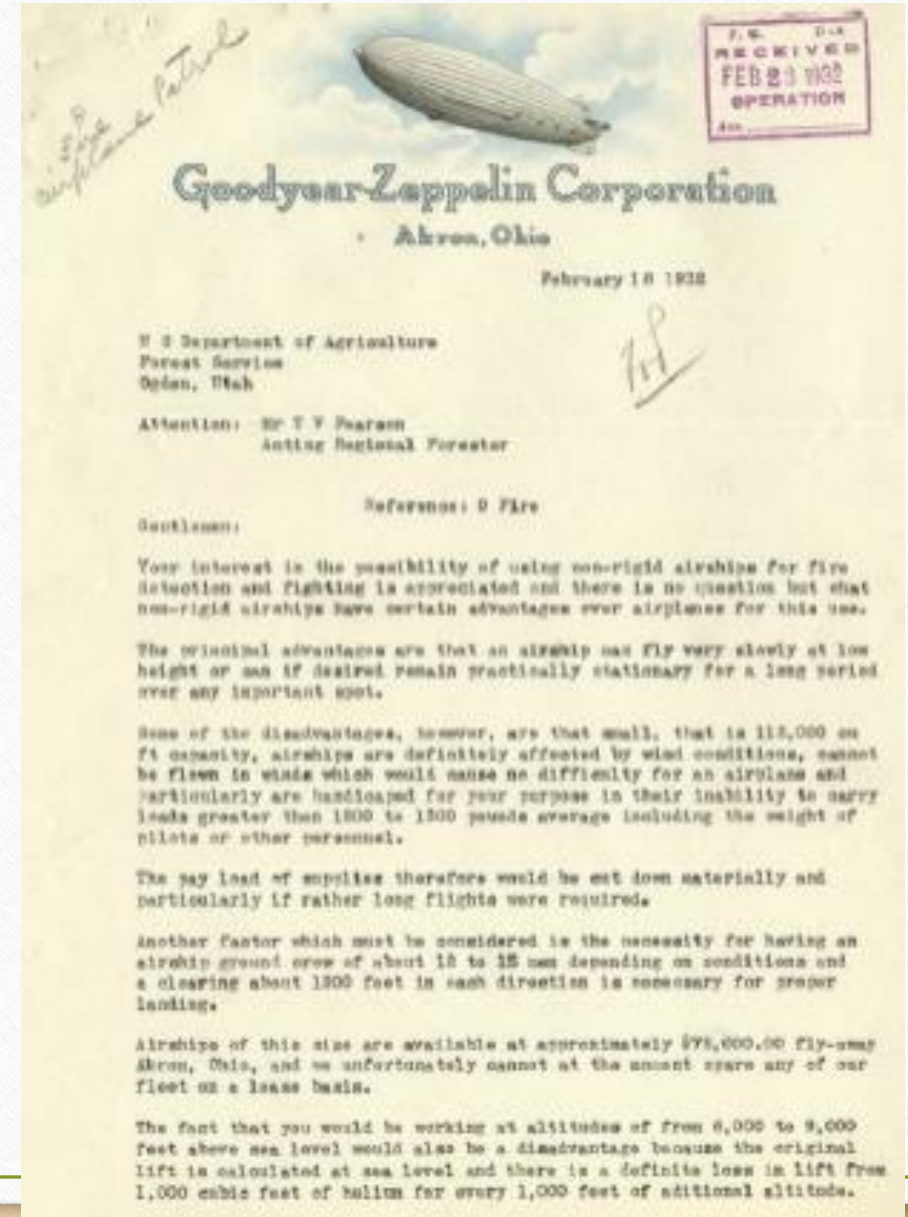
To: Forest Service, Ogden, Utah

Advantages:

- Can fly very slow
- Remain stable over an important spot

Disadvantages:

- Affected by wind conditions
- Load limit of 1,300 pounds at sea level
- Requires ground crew of 12 to 15 men
- Clearing of 1,200 feet for landing
- Price tag is \$75,000



# 1934-1935 Airplane- Parachute Scheme

---

, NOVEMBER 8, 1935.

## *New Parachute Tested As Quick Means of Placing Fighters At Forest Fires*

*Rangers Would Be Flown To Isolated Places  
By Airplane And Dropped At Edge  
of Burning Timber*

rp. Fred  
Foreign  
Thursday  
ers took  
were in  
as from

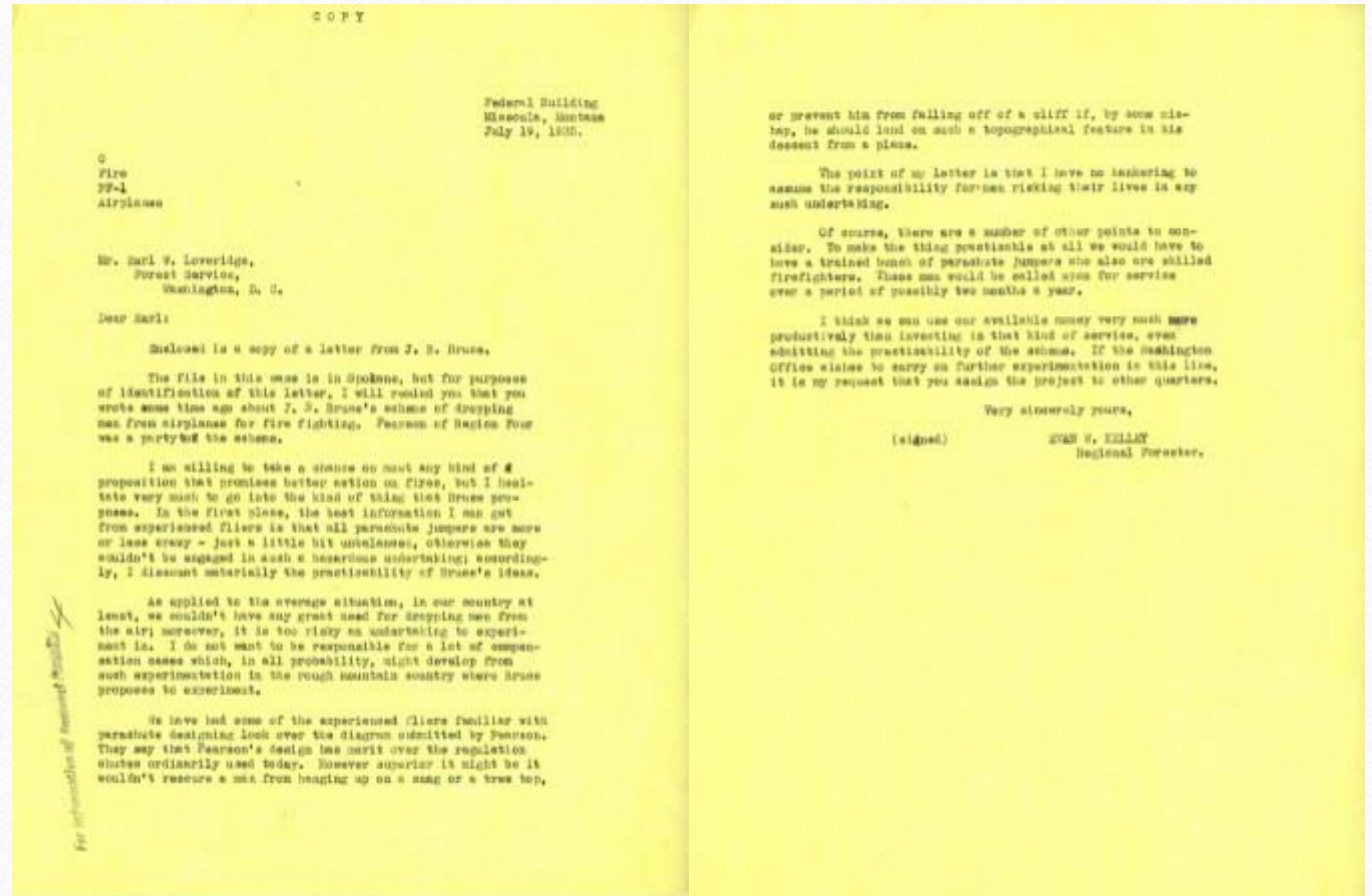
A quick-opening parachute that from the plane may also be made is expected to enable forest rangers in heavily forested areas, according to Mr. Pearson. When the chute drops from the plane to the scene of a forest fire, it is expected to enable forest rangers to drop directly from a speeding airplane to the scene of a forest fire.

July 1935

From: Regional Forester,  
Missoula

To: Forest Service,  
Washington, D.C.

“...all parachute jumpers  
are more or less crazy – just  
a little bit unbalanced...”



# Russian Smokejumper Program

Started in 1934 –  
first fire jumps in 1936

---

New York Times

March 23, 1936

Page 8

## ***Parachutists in Soviet To Fight Forest Fires***

By The Associated Press.

MOSCOW, March 22.—The People's Commissariat for the Timber Industry began today training brigades of firemen-parachutists, who will be dropped from airplanes to fight forest fires.

A special parachute also has been designed to drop fire-fighting equipment from the planes.

# AERIAL FIRE CONTROL PROJECT

## Fire Bombing

### October 1936 to May 1939 in California



Los Angeles Times \*\*

### FORESTRY PLANES DROP SUPPLIES IN FIRE-FIGHTING TESTS

Posse Pursues Indian's Slayers  
Two Believed Headed for Border After Murder Near San Diego

SAN DIEGO, June 3, 1938—  
Sheriff's deputies and menhunters

Park Dedicated

THURSDAY, AUGUST 18, 1938

### FLYING FIRE ENGINE



In the future forest fires may be extinguished by specially-equipped planes which will release chemicals from the sky. An experimental plane of this type is at the Oakland Airport now. Shown in the first plane here is Fred Funke, equipment engineer. Soon the U. S. Forest Service will experiment with it on "controlled fires" in Shasta Forest.

—Tribune photo.

### FOREST FIRE PLANE HERE FOR TESTS ON SET BLAZES

## June 1939

- Fire Bombing failed in CA
- Plane & Pilot moved to Portland, OR
- Fire Bombing again, & another failure

## July 1939

- Decided to try parachuting men to fires



## FOREST SERVICE PARACHUTE JUMPING EXPERIMENT

Winthrop, Washington  
Summer & Fall 1939

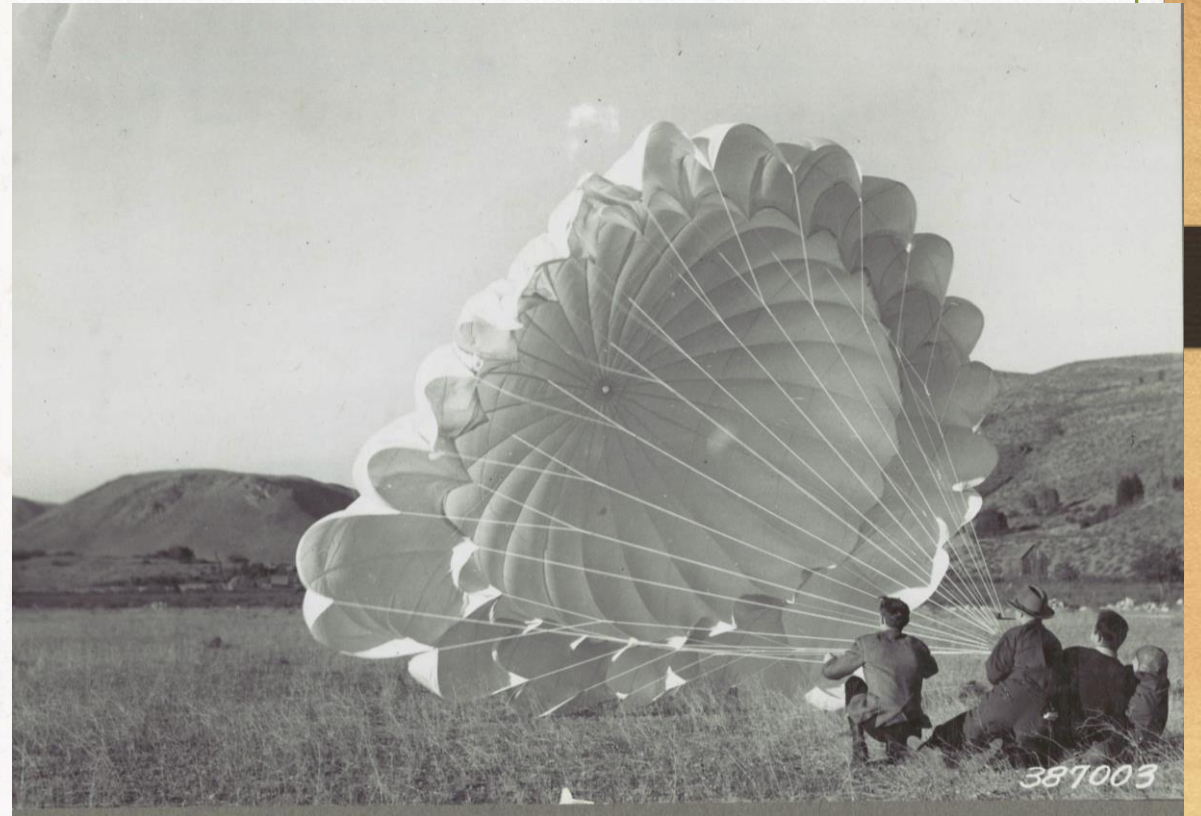
- July to Sept. --- Planning
- Oct. & Nov. --- 58 Jumps
- Eagle Parachute Corp.
- 16 Personnel
  - 2 Professional Jumpers
  - 2 Local Fire Guards/Jumpers
  - 2 Experienced Jumpers
  - 10 Others
    - Tree Climbers
    - FS Officials



# FIRST JUMP SUIT



# EAGLE PARACHUTES



# How the Eagle Parachute Opened



# Reserve Chute & Fire Pack



# NEW SUIT



# TIMBER JUMPERS



# TREE LANDINGS





HOW TO  
“LET-DOWN”  
FROM A  
TREE  
LANDING  
?????????



# 1939 JUMP SUIT – First & Second



# EXPERIMENT CONCLUSIONS

- Hard helmet with mask replaced pilot's cap
- One-piece foam padded suit replaced with a two-piece felt-padded suit
- Leg pocket added to hold let-down rope
- Pocket added on jacket arm to hold a knife
- Harness altered to permit let-down from tree landings
- 58 Jumps with no parachute landing injuries in varying terrain, elevations, & trees
  - “no uncontrollable fear of hysteria, even with rip cord being used”
- 12 of the 16 personnel made parachute jumps – ages ranged from 22 to 47
- “Smokejumpers” coined as the new job title in lieu of Timber Jumpers
- Portland & Missoula Headquarters ordered to make plans for a program in 1940

## Francis (Frank) Derry



- 1904 - Born in Wenatchee, Washington
- 1968 - Died in Big Fork, Montana
- 1930's - Worked for aircraft companies in Los Angeles area
  - Pilot & parachute stunt jumper with over 300 jumps
  - Member of Tex Rankin's Air Circus
  - Parachute business & west-coast rep. for Eagle Parachute Corp.
- 1939 – Asked by president of Eagle Corp. to be tech. rep. for the FS contract
  - Injured his back in first experimental jump, but recovered
- 1940 to 1946 – Instructor, Trainer, Rigger, Tech expert for FS program
  - Developed a Static Line in lieu of rip cord for deploying parachute
  - Developed and patented “Derry-Slotted” Parachute
  - Trained Operation Firefly Army men as smokejumpers
  - Trained CPS men to be smokejumpers
  - Trained 700 men to be smokejumpers
- 1947 – Retired to Woods Bay at Big Fork
  - Marina Dine & Dance on east shore of Flathead Lake
  - Scuba diver
  - Gopher Inn east of Libby

# Smokejumper Program Goes Operational 1940

- Johnson Flying Service with a Travelair 6000 plane provided jump platform – FS Stinson had been sold & pilot terminated
- Winthrop, Washington – 5 Jumpers selected, one injured after training & dropped = 4 Jumpers
- Missoula, Montana – 7 Jumpers selected, one failed medical & one became unnerved & dropped = 5 Jumpers
- Fire Jumps:
  - Two in Washington – August 10 & 11
  - Nine in Montana – First Smokejumper Fire Jump was July 12, on Martin Creek on the Nez Perce NF
- First Smokejumper Fire Jump was July 12
- First Smokejumper Rescue Jump was July 15
- Smokejumper cost for the season = \$9,000
- Cost if ground crews had been used = \$30,000

# MONTANA SMOKEJUMPERS

## 1940

- Training at Seeley Lake
- Stationed at Moose Ck. Ranger Station, Nez Perce NF
- 1<sup>st</sup> Fire Jump – July 12
  - Rock Pillar Fire on Martin Creek
  - Travelair 6000 R – NC-8112
  - Pilot Dick Johnson
- 1<sup>st</sup> Rescue Jump – July 15
- Static Line system developed

| DATE                | FROM        | TO                   | TYPE OF AIRCRAFT | LICENSE NUMBER | MILES | CLASS | CLASS | CLASS |
|---------------------|-------------|----------------------|------------------|----------------|-------|-------|-------|-------|
|                     |             |                      |                  |                | 1     | 2     | 3     | 4     |
| 7-5-40              | Missoula    | Big Prairie          | TA-6000          | NC 8112        |       |       |       | 3:55  |
| 7-6-40              | Missoula    | Big Prairie          | "                | NC-450N        |       |       |       | 3:00  |
| 7-7-40              | Missoula    | Big Prairie          | "                | NC 9642        |       |       |       | 2:00  |
| 7-8-40              | Missoula    | "                    | "                | NC 26861       | 1:00  |       |       |       |
| 7-9-40              | "           | "                    | "                | "              | 1:45  |       |       |       |
| 7-10-40             | Missoula    | Big Prairie          | TA-6000 Y        | NC-450N        |       |       |       | :45   |
| 7-10-40             | Big Prairie | Hol.                 | "                | "              |       |       |       | :15   |
| 7-10-40             | Hol.        | Missoula             | "                | "              |       |       |       | :50   |
| 7-10-40             | Missoula    | Bozeman              | Fairchild        | NC22046        |       |       |       | :15   |
| 7-10-40             | Mx          | to Moose + Jump Hops | TA-6000 R        | NC8112         |       |       |       | 2:55  |
| 7-12-40             | Mx          | to Moose Creek       | TA-6000 R        | NC8112         |       |       |       | 2:00  |
| 7-12-40             | Patrol      | Rock Pillar Fire     | TA-6000 R        | NC8112         |       |       |       | :55   |
| 7-12-40             | Mx          | Moose                | "                | "              |       |       |       | :55   |
| 7-13-40             | Mx          | Hamilton             | TA-6000 Y        | NC450N         |       |       |       | 3:0   |
| 7-13-40             | Mx          | Patrol               | "                | "              |       |       |       | 1:35  |
| 7-13-40             | Mx          | Drop                 | "                | "              |       |       |       | 2:25  |
| 7-13-40             | Hamilton    | Weippe               | "                | "              |       |       |       | 1:15  |
| TOTAL HOURS TO DATE |             |                      |                  |                | 2:45  | 1:15  | 2:20  |       |

# Travelair 6000 – NC8112



Moose Creek Ranger Station, Nez Perce NF  
Taking off July 12, 1940, for First Fire Jump  
Johnson Flying Service



Restored NC-8112 at Osh Okosh, Air Show – 2021  
Mid America Flight Museum (North) Urbana, Ohio

June 26, 1940:

- U.S. Army Officers Observe Smokejumper Training Operations at Seeley Lake. Included Major William C. Lee from Ft. Benning, Georgia

July 12, 1940:

- First Smokejumper Fire Jump

July 25, 1940:

- Army Airborne Infantry "Test Platoon" approved

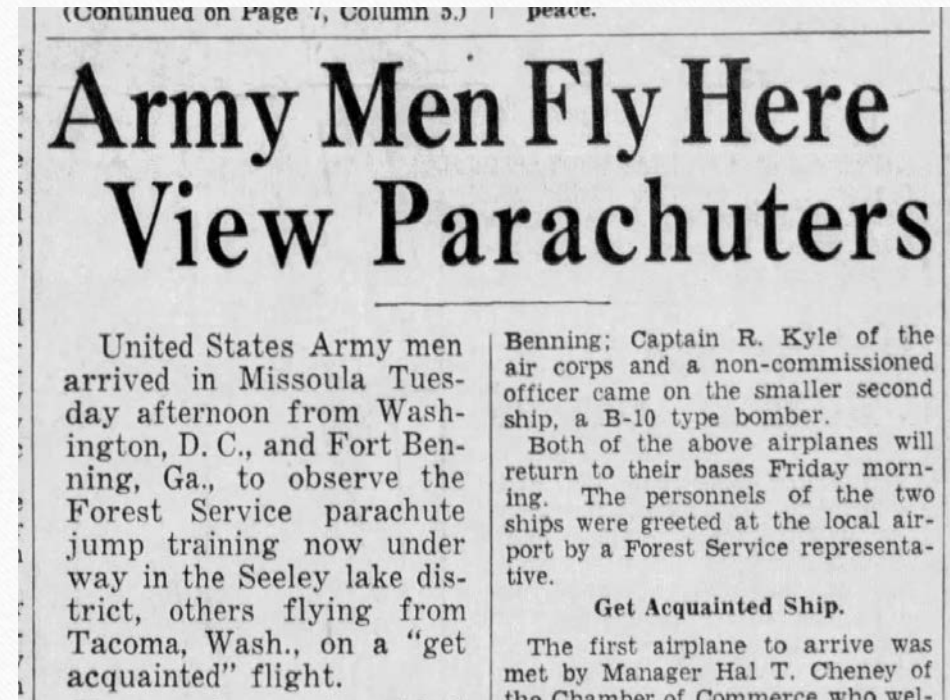
September 9, 1940:

- Test Platoon made 5 training jumps at Ft. Benning

Major Lee was promoted to two-star Major General & is considered the "Father of the American Airborne"

- Prepared paratroopers for allied air invasion in June 1944

## Missoulain, June 26, 1940



## 81 YEARS OF SMOKEJUMPING HISTORY SINCE 1940

- The War Years
- Operation Firefly
- Conscientious Objectors from the Civilian Public Service
- Mann Gulch Fire in Montana – 1949
- Smokejumpers in the CIA – 1960-1974
- Women enter smokejumping - 1981
- South Canyon Fire @ Storm King Mountain in Colorado --1994
- Changes in Parachutes & Equipment
- Aircraft used for Jump Platforms
- Over 6,000 smokejumpers – Forest Service & Bureau of Land Management
- Smokejumpers Killed in the Line of Duty – 30 from 1945 to 2021
- National Smokejumper Association website – [www.smokejumpers.com](http://www.smokejumpers.com)
- National Museum of Forest Service History – [www.forestservicemuseum.org](http://www.forestservicemuseum.org)

# HISTORY OF SMOKEJUMPING

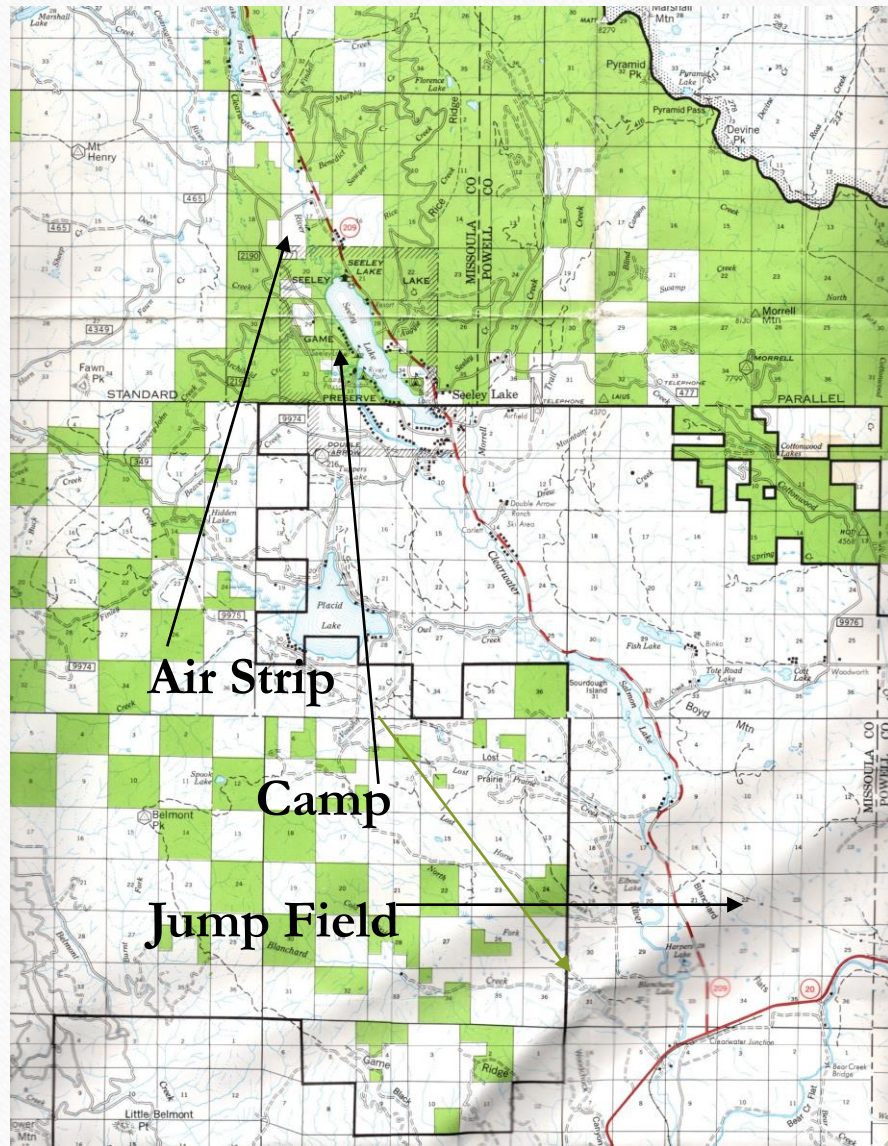
## A Review of Part One

- 1915 – Wildfire Scouting in Wisconsin with a “Curtis Flying Boat”
- 1919 & 1920 – Forest Service/Army Aerial Fire Patrols in California & Oregon
- 1930 – Tool & Food dropping started, first by free-fall, and then by parachute to firefighters
- 1930 – Shoo-fly-fields began to appear in the back-country -- 76 by 1950
- 1934 & 1935 – Airplane-Parachute Invention
- 1935 – 10 am Fire Control Policy
- 1936 – Russians make first fire parachute jump
- 1936-1939 – Aerial Fire Control Project Experiment - “Retarder” drops of water, chemicals, powders, & explosives on fires
- 1938 – Steerable Parachute patented
- 1939 – Successful Smokejumper Experiment @ Winthrop, Washington
- 1940 & 1941 – Smokejumping Operational on Experimental Basis

## **SMOKEJUMPING OPERATIONAL – In 1940**

### **(But still determined to be experimental)**

- FS Stinson airplane purchased in 1938, & pilot declared surplus in March 1940
- Missoula and Portland, Oregon ordered to make plans for SMJ Operations
- 16 suits, parachutes, and 8-pound radios purchased at Portland
- June 10 to 14--Dick Johnson flies Travelair 6000 to Winthrop, WA. Five SMJ trained
- June 18 to July 5 – Training in Montana - 7 of 16 applicants selected (1 failed physical)
  - CCC at Seeley Lake (present day Camp Paxson)
  - Airstrip was about one mile north of Seeley Lake
  - Training Landing Zones -- Blanchard Flats @ Clearwater Junction & Airstrip
  - June 26 – Four Army Officers observed SMJ training, equipment, cargo dropping, & jumps (included Major General William Lee, “Father of the Airborne”)
- One became “unnerved” & quit, leaving 6 qualified plus Frank Derry – professional/trainer
- July 6 - crew of 7 moved to Moose Creek Ranger Station (Nez Perce NF)
- Doctor Leo Martin also trained as a para-doctor for rescue jumps – born in 1903, from Flathead area, Captain in Army Medical Corps when he died in 1942 in a military plane crash.



## 1940 Summary

- July 12 – First Fire Jump – Rock Pillar Fire on Martin Creek in Nez Perce NF  
(month before US Army commissioned an Airborne “Test Platoon” of 48 at Ft. Benning)
- 19 parachute jumps on 9 fires & one rescue jump in Montana & Idaho
- 4 parachute jumps on 2 fires in Washington
- SMJ suppression expenses for 9 fires in Montana was \$2,220 – estimated ground crew expense would have been \$27,000.
- Lessons learned/changed systems:
  - Use of rip cord system makes jumpers nervous & anxious
  - Static Line deployment system developed by Frank Derry & approved by CAA
  - Cargo dropping procedure changed
  - Parachute radio pocket moved to a leg pocket
  - SMJ Project Leaders to be trained as smokejumpers
  - Two men jump on the same airplane pass over landing zone on a fire
- Plans were made for 50 smokejumpers to be used in 1941
- Contract Airplanes to be used

## 1941

- SMJ is an expensive proposition
- Budgets constrained – funded for 27 (not 50) SMJ
  - 16 rookie jumpers hired, 8 returning jumpers plus Frank Derry as trainer
- Need to identify “potential trouble-making fires in advance”
- Stoney Creek CCC (near Nine-Mile RS) served as SMJ Training Camp
- New airfield at Six Mile (Huson, MT)
- Training jump spots were at Stoney Creek, Six Mile, & Houle Creek
- Three, eight-person squads – Nine Mile, Moose Creek, Big Prairie (on Flathead NF)
- 34 fire jumps on 9 fires – 6 in Montana & 3 in Washington (dispatched from Montana)
- Winthrop SMJ Base used for cargo dropping on Chelan NF

## World War II Impacts --- War Declared in Dec. 1941

- 1942 – Men recruited for military service – Few available for SMJ Program
  - Military ordered all parachutes being manufactured
  - SMJ began using military condemned chutes, converting them with “Derry Slots”
- 1943 -- CPS Program Initiated – used Conscientious Objectors for 1943, 1944, & 1945
  - New SMJ Bases established in Cave Junction, OR and McCall, ID
  - 25 Military medical personnel trained – Army & Coast Guard
- 1944 – Nov. to April 1945, Japanese anti-personnel & incendiary bombs sent to North America
- 1945 -- Base at Winthrop, Wash. reactivated
  - Triple Nickel (555<sup>th</sup>) Army Parachute Battalion (Operation Fire-Fly)
  - Army Veterans began returning from military service late in the year
  - Most severe year for wildfires since 1940

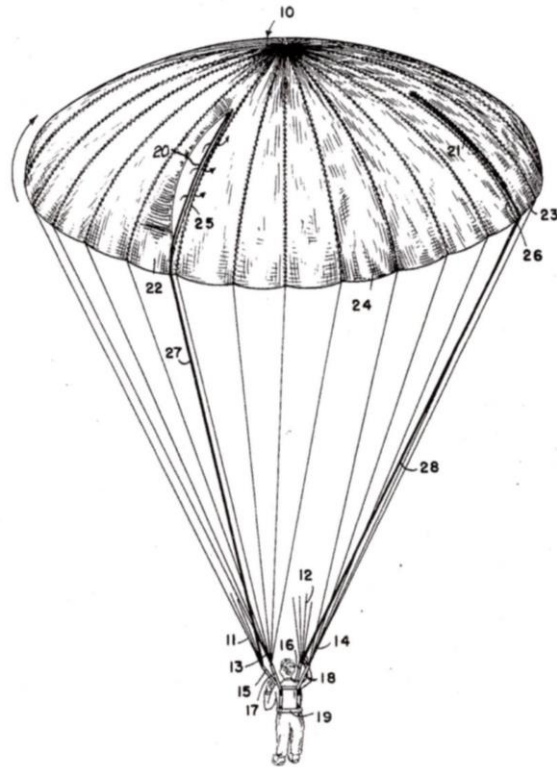
Sept. 4, 1945.

F. M. DERRY

2,384,416

PARACHUTE

Filed March 17, 1944



INVENTOR  
F. M. DERRY

## Derry-Slotted Parachute (Frank Derry)

- Frank began design & development in 1942
  - Out of necessity because military was buying the Eagle Parachutes previously used
- Final design in 1943 & 1944
- Patented by Frank Derry in 1945
- Initial source was condemned military parachutes
- Irvin Parachute Company parachutes used
- Frank declared the patent “dedicated to the free use of the People in the territory of the United States” (Frank received no royalty)



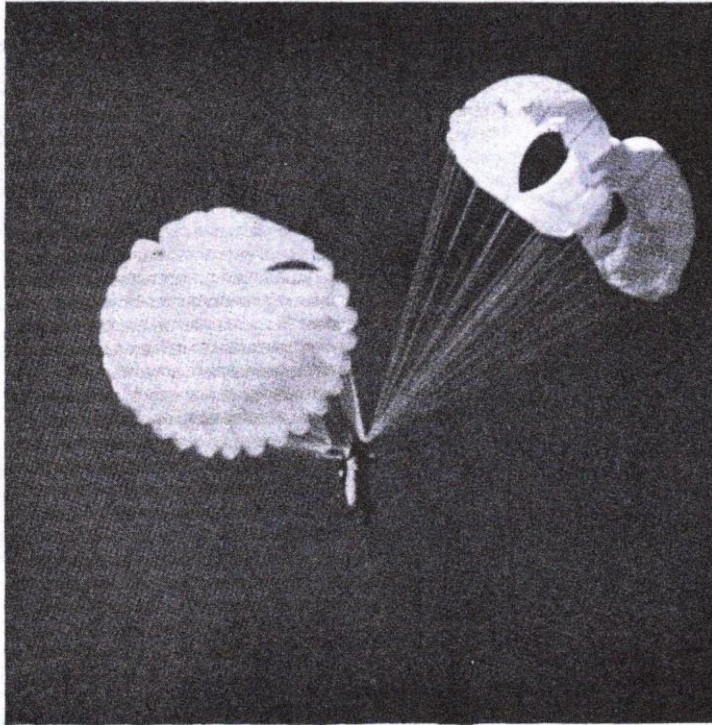
30-foot Eagle Parachute



27- foot Derry Slotted Parachute



CPS Jumper, Allen Moyer:  
Main parachute "fouled" --  
Pulled rip cord for his reserve.



### *Tangled Chutes*

Once in a while a chute becomes fouled. Maybe one of the load lines is over the top when the chute opens—a line-over in Smoke Jumper parlance. Perhaps in slipping his chute the jumper gets a couple of load lines tangled around his feet or his emergency, or a line caught on his mask.



Chutes opening over Stoney Creek CCC - 1944



CIVILIAN PUBLIC SERVICE

## CPS Unit Number 103-01

SMJ for 1943-1945

Initial training in 1943 @ Seeley Lake

Over 200 served as SMJ

Brethren, Friend, Mennonite, Amish, &  
Hutterites

Discrimination issues

Served without pay – stipend provided

FS provided a clothing allowance starting '44

About 90% of SMJ in 1943, '44, & '45

Most had no prior Fire Experience





1944 - 1946  
Camp &  
Training at  
Stoney  
Creek CCC

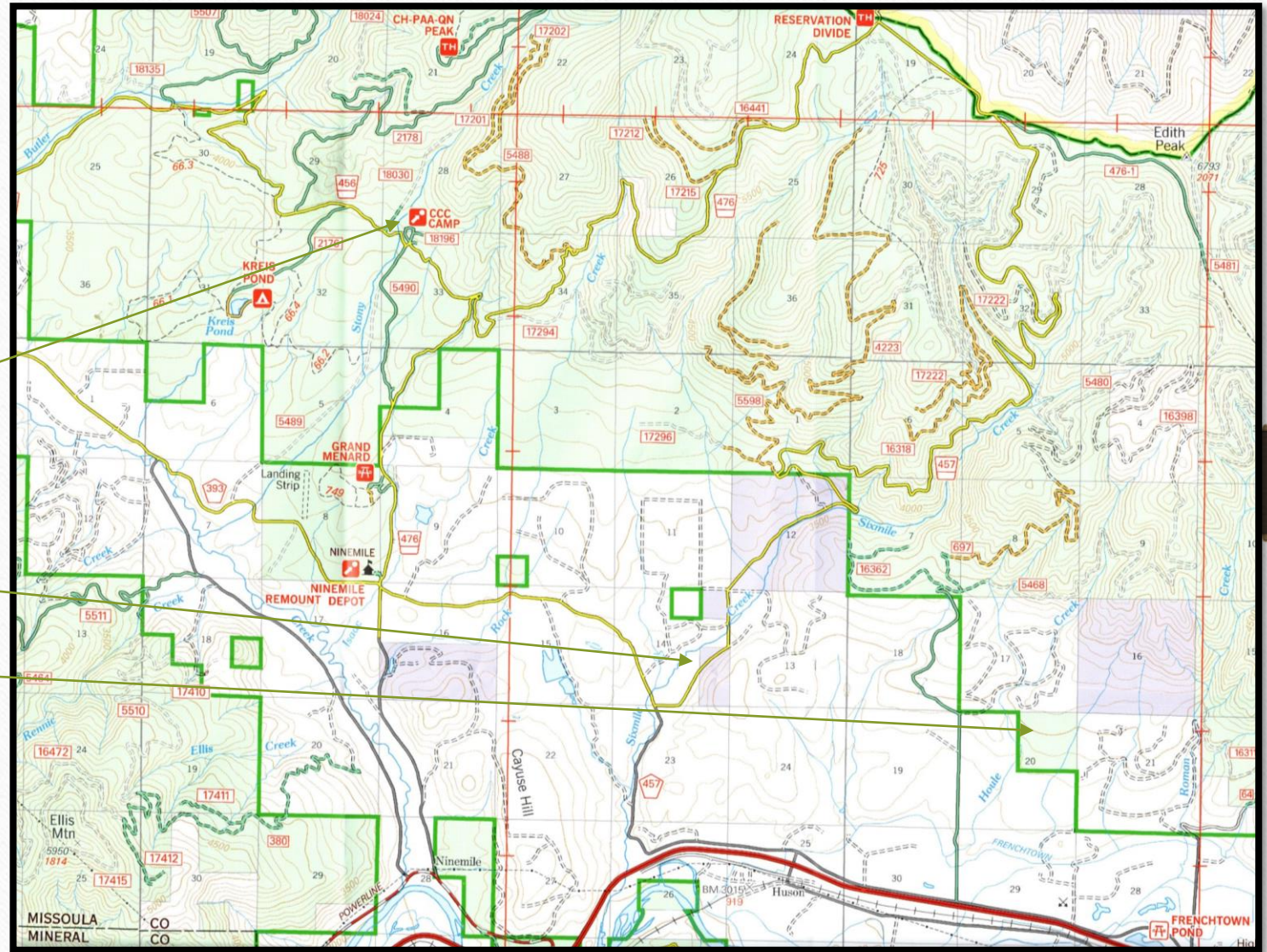


# Ninemile Vicinity

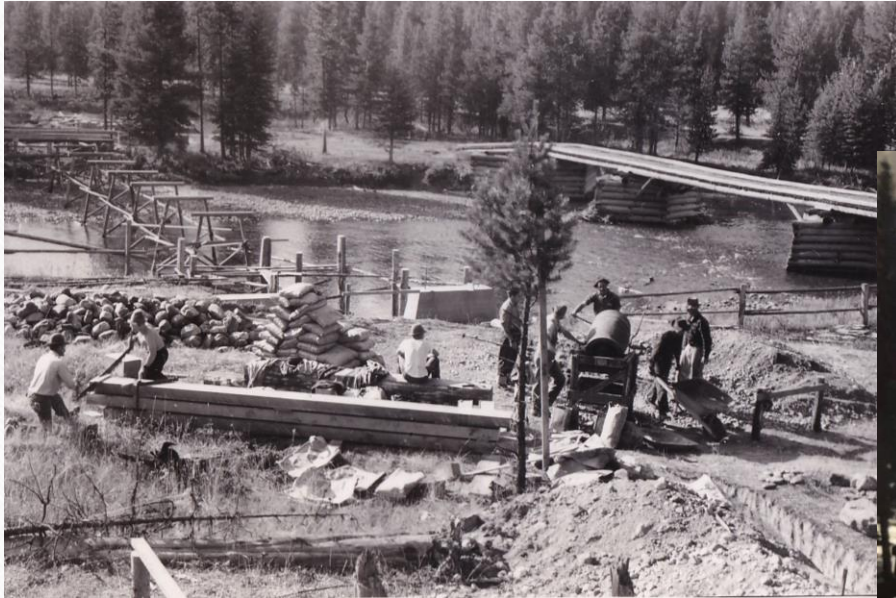
Stoney Creek Civilian  
Conservation Corp Camp

Six Mile Airstrip

Houle Creek



CPS were provided Year-round Work – Blister Rust, Lookout, Trail Maint., Haying @ Nine Mile, Tree Nursey



**Bridge @ Big Prairie  
over Flathead River  
Built 1943 & 1944**



**May 8, 1944, letter home from CPS Allen Moyer:**

- Have 60 new (CPS) men here
- Will have 100 to 110 CPS jumpers this year
- 1/3 will be Mennonite
- 16 will be FS men – an ex-paratrooper & an ex-marine - we get along great – can't tell FS from a CPS
- Training (this year) at Nine Mile – trained at Seeley Lake last year
- Trained Army doctors & Coast Guard at Seeley Lake last year
- Have been working on irrigation ditches & driving tractor
- FS did some “finegling” and bought us 2 pair of pants, shirts, socks, and one pair boots

**July 28, 1945, letter home from CPS Moyer:**

- Been going out on aerial patrol suited up in case fire spotted – (Cont. Area Plan for 1944 & 1945)
- Jumped on a big fire & by Saturday 101 men had jumped on it – over 600 total firefighters
  - “High school boys from blister rust camps, Mexican Nationals, German Internees, CO's, bar flys, prospectors, lumber jacks, & Negro paratroopers”

## 555<sup>th</sup> Paratrooper Parachute Infantry Battalion – Operation Fire-Fly



### Segregated Black Paratrooper Unit

- Pendleton, OR – 200 men
- Chico, CA – 100 men
- Initially assigned to disarm Balloon incendiary & anti-personnel Bombs sent from Japan Nov. 1944 – April 1945
- They were on 28 fires – 15 “jumped”
- First SMJ fatality – Malvin Brown – August 6, 1945, fell from a tree in a fire-jump on the Umpqua NF.



## 1946 – Rebuilding Smokejumper Program After World War II

- Some CPS remained but very few – returning GI's had preference for Civil Service hiring in 1946
- 100 rookie jumpers hired – about 80% had prior Military service – fire & jumper training was a big task
- Yellowstone & Glacier NPS provided new funding with jumps to the Parks
- Contractor air service added C-47's to their fleets
- After a 7-year hiatus, water bombing experiments resumed with suitable WWII airplanes becoming available – B-29's & P-47's (P-47 could carry two-165-gallon bombs)
- David Godwin, responsible for starting the SMJ Program in 1939 was appointed Chief of Fire Control in DC. He died in a commercial airline crash in June 1947 in West Virginia.

## Smokejumpers 1940 through 1946 (approx.)

| • <u>YEAR</u> | <u>ROOKIES</u> | <u>RETURNED</u> | <u>TOTAL</u> |                                   |
|---------------|----------------|-----------------|--------------|-----------------------------------|
| • 1940        | 12             | --              | 12           |                                   |
| • 1941        | 16             | 8               | 24           |                                   |
| • 1942        | 29             | 5               | 34           |                                   |
| • 1943        | 66             | 2               | 68           |                                   |
| • 1944        | 72             | 42              | 114          |                                   |
| • 1945        | 104            | 58              | 162          | Plus over 100 - 555 <sup>th</sup> |
| • 1946        | 100            | 15              | 115          |                                   |