



2018 View from the field

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8 years with IMTs in Southwest and Great Basin GACCs

2018 Fire Season: GISS and SITL with
Great Basin Type 1 IMT (Team 1)

2018 Pole Creek Fire

Uinta-Wasatch-Cache NF

Nephi, UT

102,104 acres

Sept 6 – Oct 7, 2018

IR Resources Utilized by GB Team 1

Aircraft 3

NIOPS

Owyhee Air – private vendor based in Nampa, ID

USFS Firewatch Cobra



BALD MOUNTAIN UT--UWF 000892

POLE CREEK UT--UWF 000971



Batum NAB 83

Progression Map 9/25/18

Bald Mountain Perimeter as of 9/24/18

@2022 18,600 acres

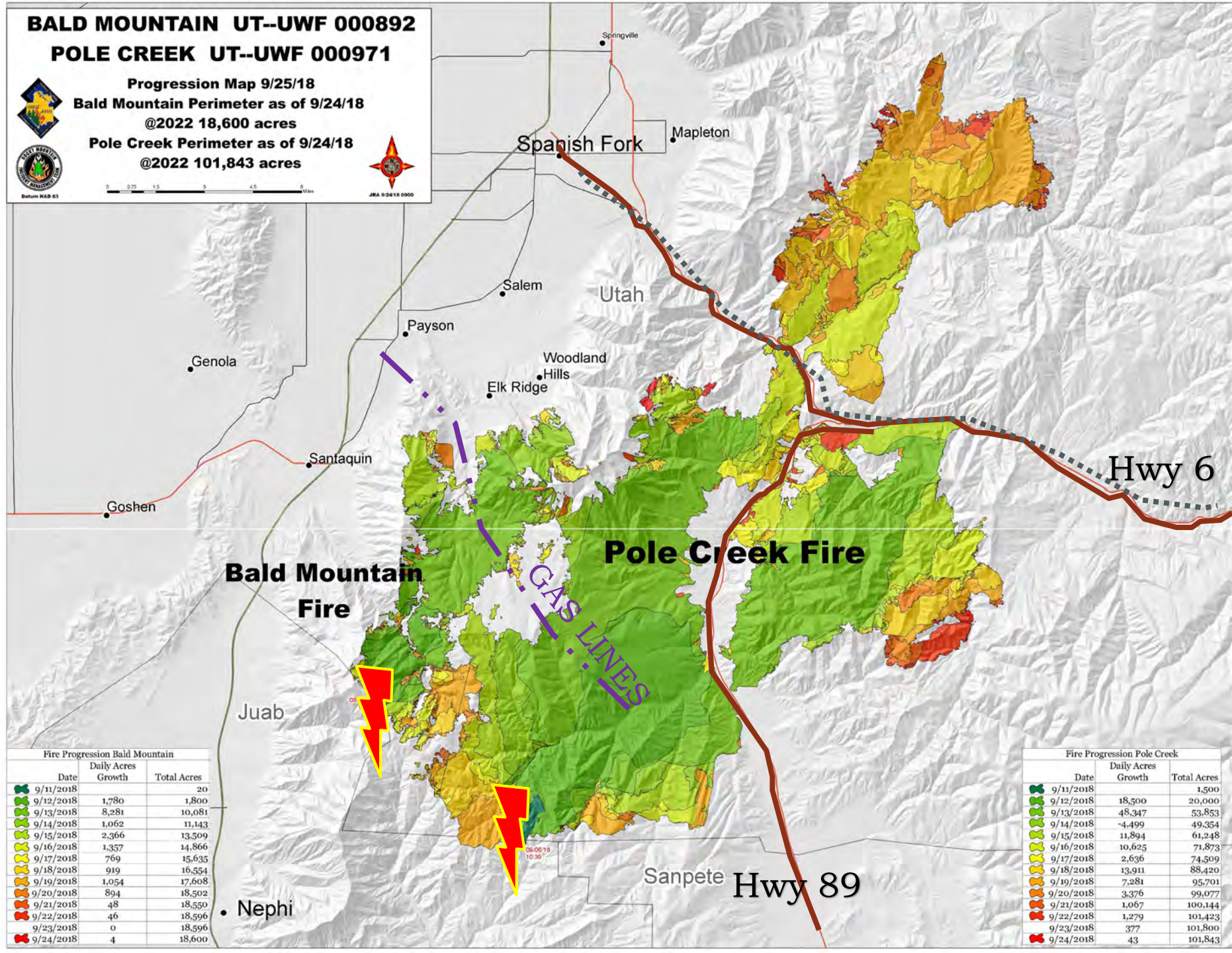
Pole Creek Perimeter as of 9/24/18

@2022 101,843 acres

0 0.75 1.5 3 4.5 6 Miles

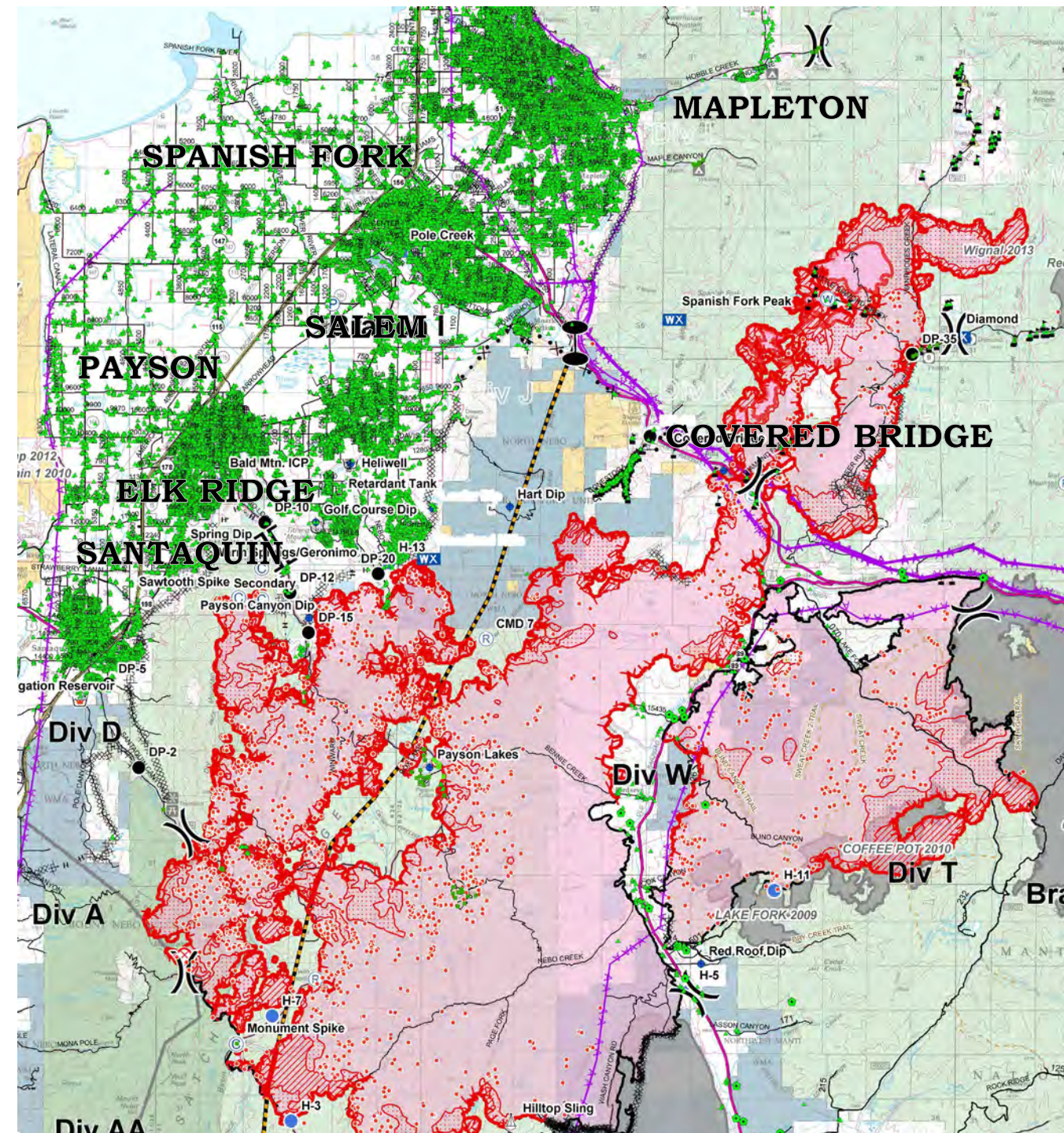


JRA 9/24/18 0900



Fire Progression Bald Mountain		
Date	Daily Acres Growth	Total Acres
9/11/2018	20	20
9/12/2018	1,780	1,800
9/13/2018	8,281	10,081
9/14/2018	1,062	11,143
9/15/2018	2,366	13,509
9/16/2018	1,357	14,866
9/17/2018	769	15,635
9/18/2018	919	16,554
9/19/2018	1,054	17,608
9/20/2018	894	18,502
9/21/2018	48	18,550
9/22/2018	46	18,596
9/23/2018	0	18,596
9/24/2018	4	18,600

Fire Progression Pole Creek		
Date	Daily Acres Growth	Total Acres
9/11/2018	1,500	1,500
9/12/2018	18,500	20,000
9/13/2018	48,347	53,853
9/14/2018	4,499	49,354
9/15/2018	11,894	61,248
9/16/2018	10,625	71,873
9/17/2018	2,636	74,509
9/18/2018	13,911	88,420
9/19/2018	7,281	95,701
9/20/2018	3,376	99,077
9/21/2018	1,067	100,144
9/22/2018	1,279	101,423
9/23/2018	377	101,800
9/24/2018	43	101,843



- WUI!! Dynamic incident close to dense populated communities.
- Potential to accelerate rapidly in size
- Evacuations in place on Sept 13 when GB Team 1 arrived
- More evacuations triggered when fire jumped Hwy 6
- At it's peak:
 - 6000 people evacuated
 - 2600 residences threatened
 - Hwy 89, Hwy 6, and Railroad shut down
 - Multiple Forest closures

Inbrief Fire Behavior and Weather

- EXTREME FIRE BEHAVIOR

- Running fire
- Wind driven runs
- Long-range spotting

- RED FLAG WARNING!

- Several days in a row
 - Higher temps
 - Single digit humidities
 - Wind gusts up to 50 mph



Incident morning products














- **Products - Morning**

- **Festival of FRENZY!**
- **Less paper .. More digital products ..Delivery of incident data via Avenza maps and Collector. Briefing maps printed by 0530 for 0600 briefing**
- **Rest of maps ready before folks head for fireline - 0615ish**
- **If SITL doesn't make deadline, folks head to fire with no data or old data**

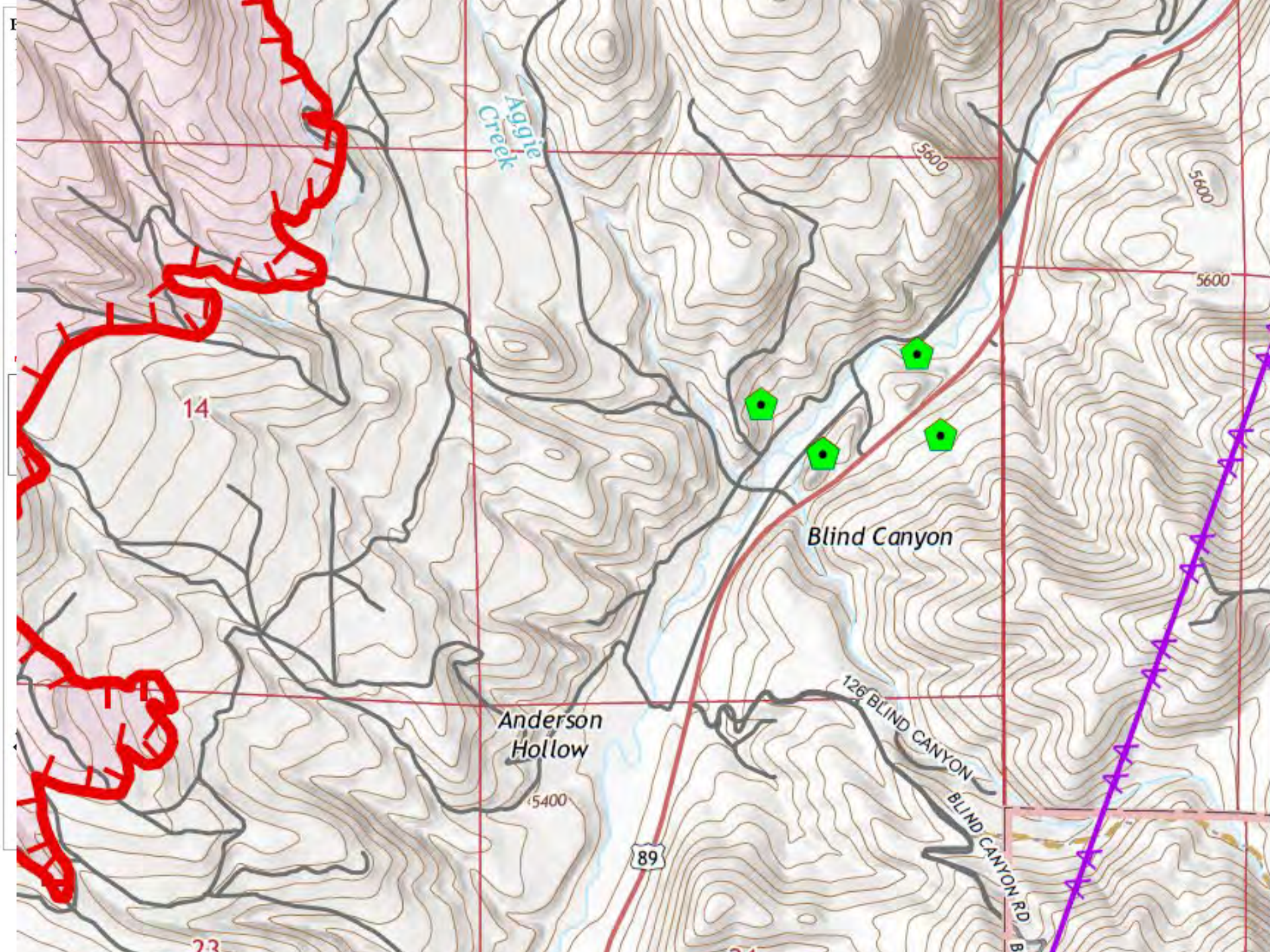
Filename



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Aircraft 3

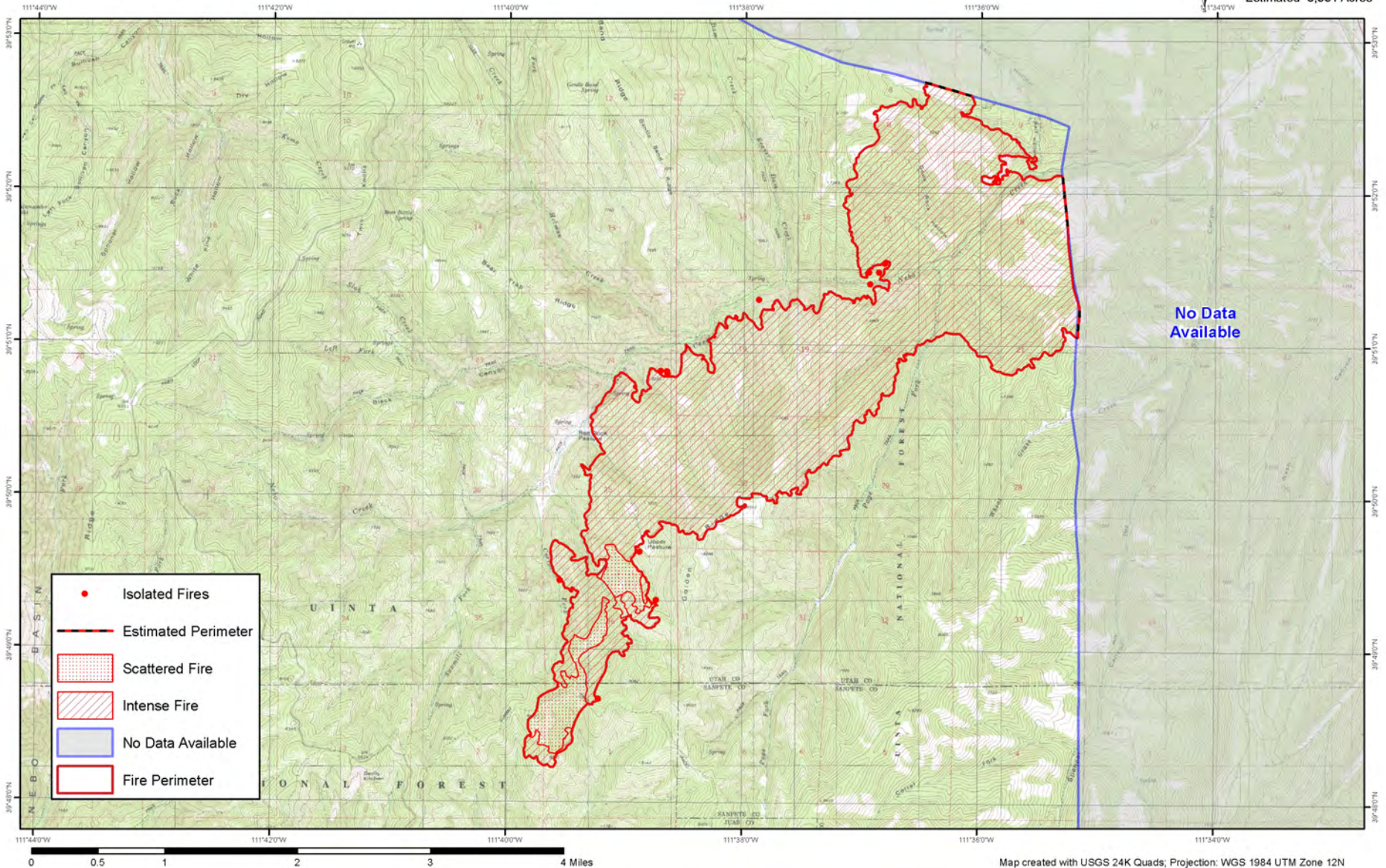
- 5 flights total
- Fire Growth: 10,000 - 74,509 acres
- **Incident Products:** Standard suite of products
- **Challenges**
 - Timeliness of products during days of extreme fire behavior / multiple VARs
 - First 3 operational shifts products didn't make operational deadlines
 - Unknown when products would arrive
 - Requested Owyhee but couldn't get them because we had Aircraft 3
- **Successes**
 - Prioritized products - Got a timely fire perimeter the last couple flights



Pole Creek Wildfire
Uinta - Wasatch National Forest



13 September 2018
c. 0400 UTC
Estimated 3,881 Acres



Map created with USGS 24K Quads; Projection: WGS 1984 UTM Zone 12N




NIROPS – 149Z



- 10 flights total
- Fire Growth: 49,354 - 101,843 acres
- **Incident Products:** Standard suite of products
- **Successes**
 - Responsive GACC reassigned 149Z to Pole Creek Fire
 - Timely – met operational deadlines for products
 - Found another start in interpretation
 - Excellent communication with incident / IRIN from Bald Mountain
 - Large geographic area interpretation was accurately accomplished
- **Challenges**
 - Perimeter Datum Shift



 Project

Input Dataset or Feature Class

IRIN Perimeter

Input Coordinate System (optional)

GCS_WGS_1984

Output Dataset or Feature Class

C:\Users\kgromatzky\Documents\ArcGIS\Default.gdb\DatumShift_Project

Output Coordinate System

NAD_1983_UTM_Zone_12N

☐ Vertical (optional)

Geographic Transformation (optional)

WGS_1984_(ITRF00)_To_NAD_1983
NAD_1983_HARN_To_WGS_1984_2 + NAD_1983_To_HARN_Utah
NAD_1983_HARN_To_WGS_1984_3 + NAD_1983_To_HARN_Utah
WGS_1984_(ITRF00)_To_NAD_1983_HARN + NAD_1983_To_HARN_Utah
NAD_1983_To_WGS_1984_5
NAD_1983_To_WGS_1984_Utah_50
NAD_1983_HARN_To_WGS_1984 + NAD_1983_To_HARN_Utah
NAD_1983_To_WGS_1984_4
NAD_1983_To_WGS_1984_1
NAD_1927_To_WGS_1984_79_CONUS + NAD_1927_To_NAD_1983_NADCON
NAD_1927_To_WGS_1984_6 + NAD_1927_To_NAD_1983_NADCON
NAD_1927_To_WGS_1984_4 + NAD_1927_To_NAD_1983_NADCON

☐ Preserve Shape (optional)

Maximum Offset Deviation (optional)

Unknown

OK Cancel Environments...

Datum Shift

Projecting from
WGS 84 to UTM.

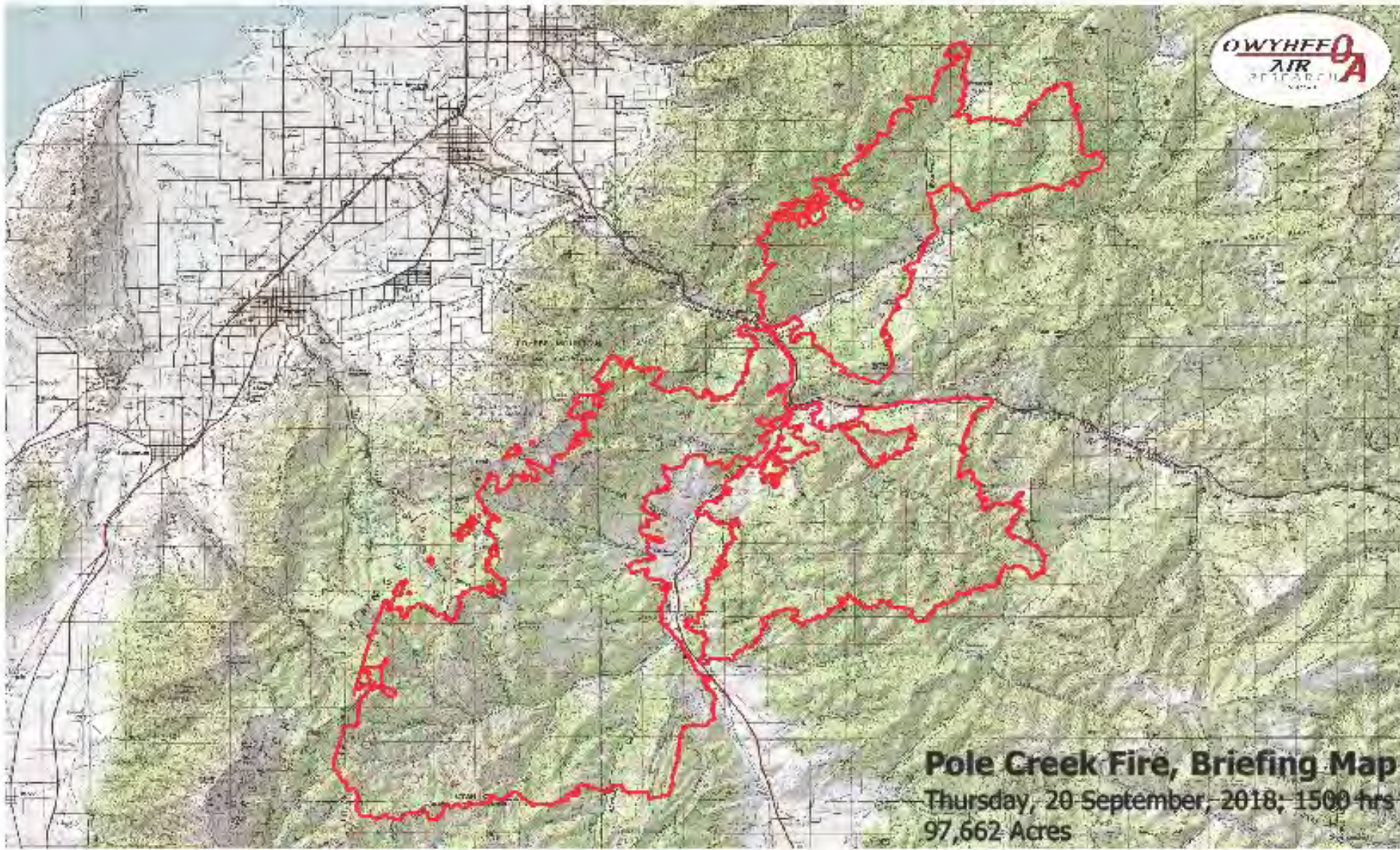
Incorrect
Transformation
will introduce
data shift



Owyhee Air

- 5+ flights total
- Fire Growth: 74,000 - 101,843 acres
- Private vendor – based in Nampa, ID
- Incident Products: Fire Perimeter during afternoon
- Challenges
 - Incident not initially allowed to order
 - Owyhee Air reserved for fires NOT assigned NIROPS or Aircraft 3
 - Green lighted for Owyhee but order process unclear – Confusion at GACC, Local Dispatch, Incident level
 - Owyhee flew fire on Sept 15 but incident unaware. Data not posted to FTP, sent to SITL email but no one knew to check email.....
- Successes
 - Valuable daytime perimeter data provided intel on fire growth during extreme fire behavior in relation to VARs
 - Able to schedule afternoon flights, flights over specific areas of concern
 - Data provided to incident in time for updated evening operational briefing
 - GACC allowed us to contact them directly
 - Afternoon perimeters supplement to NIROPS nightly perimeter
 - Excellent communication from Owyhee to / from Incident

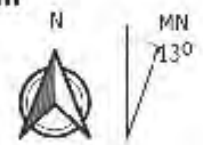




Pole Creek Fire, Briefing Map
Thursday, 20 September, 2018; 1500 hrs
97,662 Acres

Legend
— Burn Perimeter

Projection: WGS 84
Scale: 1:128,000
Produced by Owyhee Air Research, Inc.
dmelody@owyheeair.com (208)442-5405



USFS Firewatch Cobra

- Served as Helicopter Coordinator (HLCO) on incident
- Outfitted with infrared sensors for intelligence gathering
- Flew multiple daytime flights as requested

Incident Products: Tactical support. Real time color video, infrared intelligence

Successes

- Real-time color video, infrared intelligence during critical periods of operation
- Work directly with Operations to assess and locate fire during critical operations or for isolated recon of an area of concern (ie WUI)

Challenges

- Operated independently of SITL
- Data wasn't necessarily delivered to best audience



Suggestions for Future

- Educate on / develop process for ordering IR sources outside of NIROPS
- Something better than nothing regarding data ..
Perimeter's always welcome!
- Datum shift - can you provide to incident in WGS 84?
We're cool with that....!
- Public has access to IR products posted to FTP and this is problematic



*Thank you NIROPS, et al.
all your work this year!*

Questions?

