



2019 NIROPS National Summary

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National Infrared Program Manager
November 13, 2019
NIROPS Closeout, NIFC, Boise



2019 – A Slow Year in CONUS

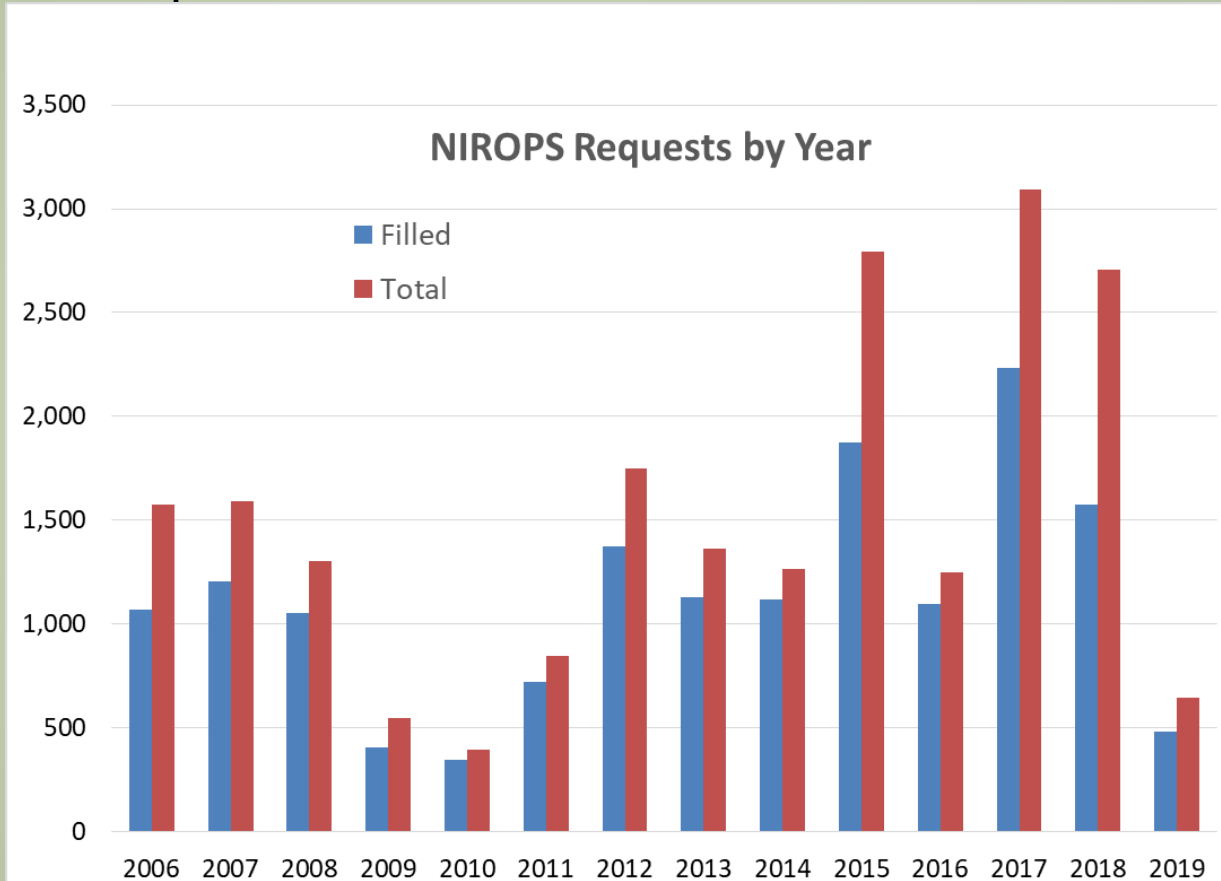
- 4.6 million acres burned, 56% acres in AK
- 70% of the ten year US average (2009-2018)
- 35% of the ten year Conus average
- Never went to PL4*, first time since 2010
- First missions – June 12 in AZ, NM, & CA
- Last mission – ?

Acres from IMSR 11/5/19

*PL = Preparedness Level (1 thru 5)

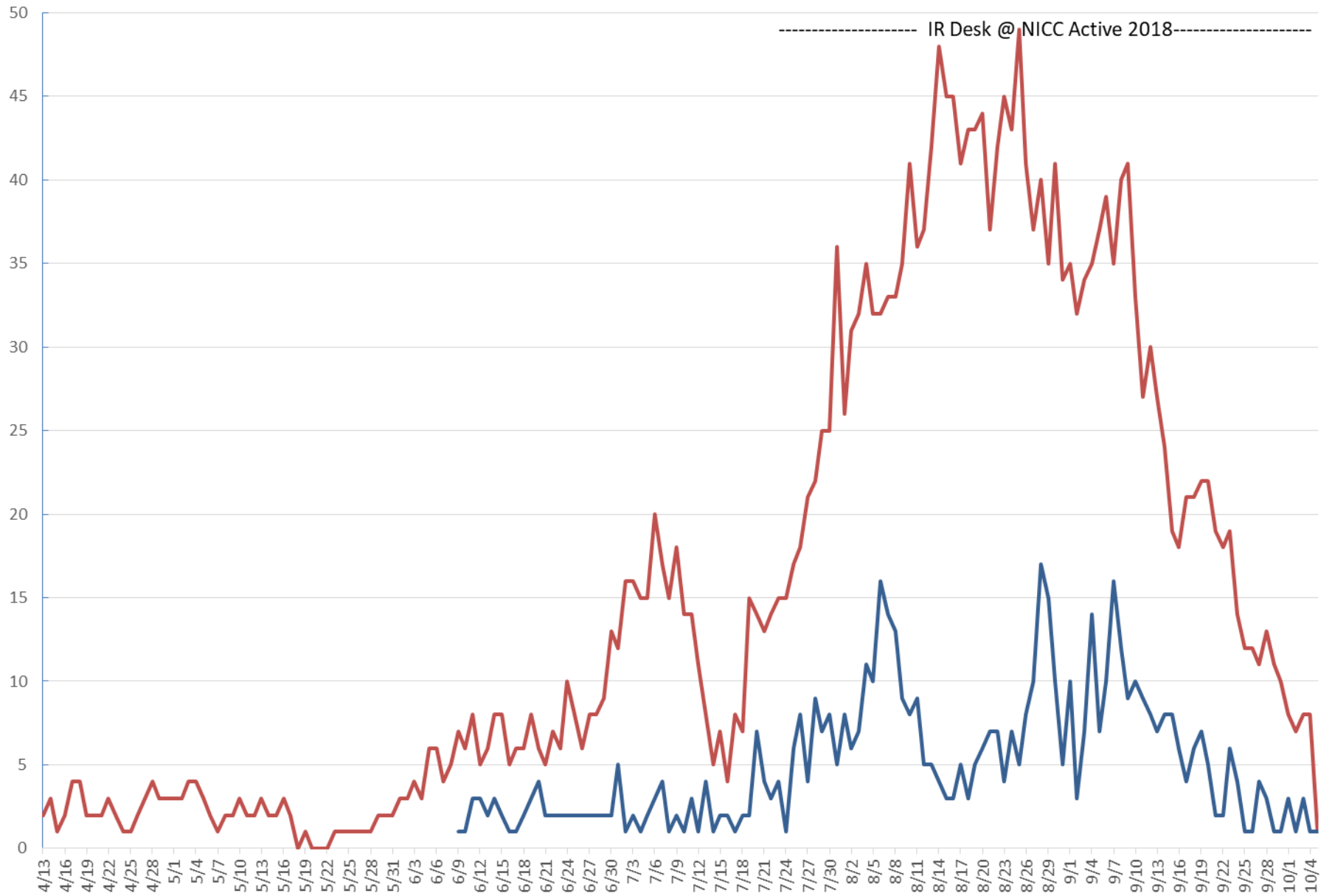
2019 NIROPS Requests

- 643 total requests with 483 filled
- 10 yr avg (2009-2018) 1601 requests and 1188 filled
- 5 yr avg (2014-2018) 2221 requests and 1579 filled
- 25% UTF rate,
13% non-Wx UTF
- Aircraft 3 filled
6% of missions
(15% in 2018)



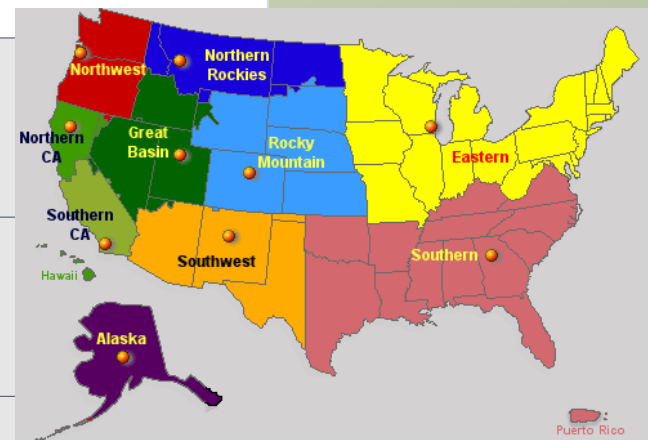
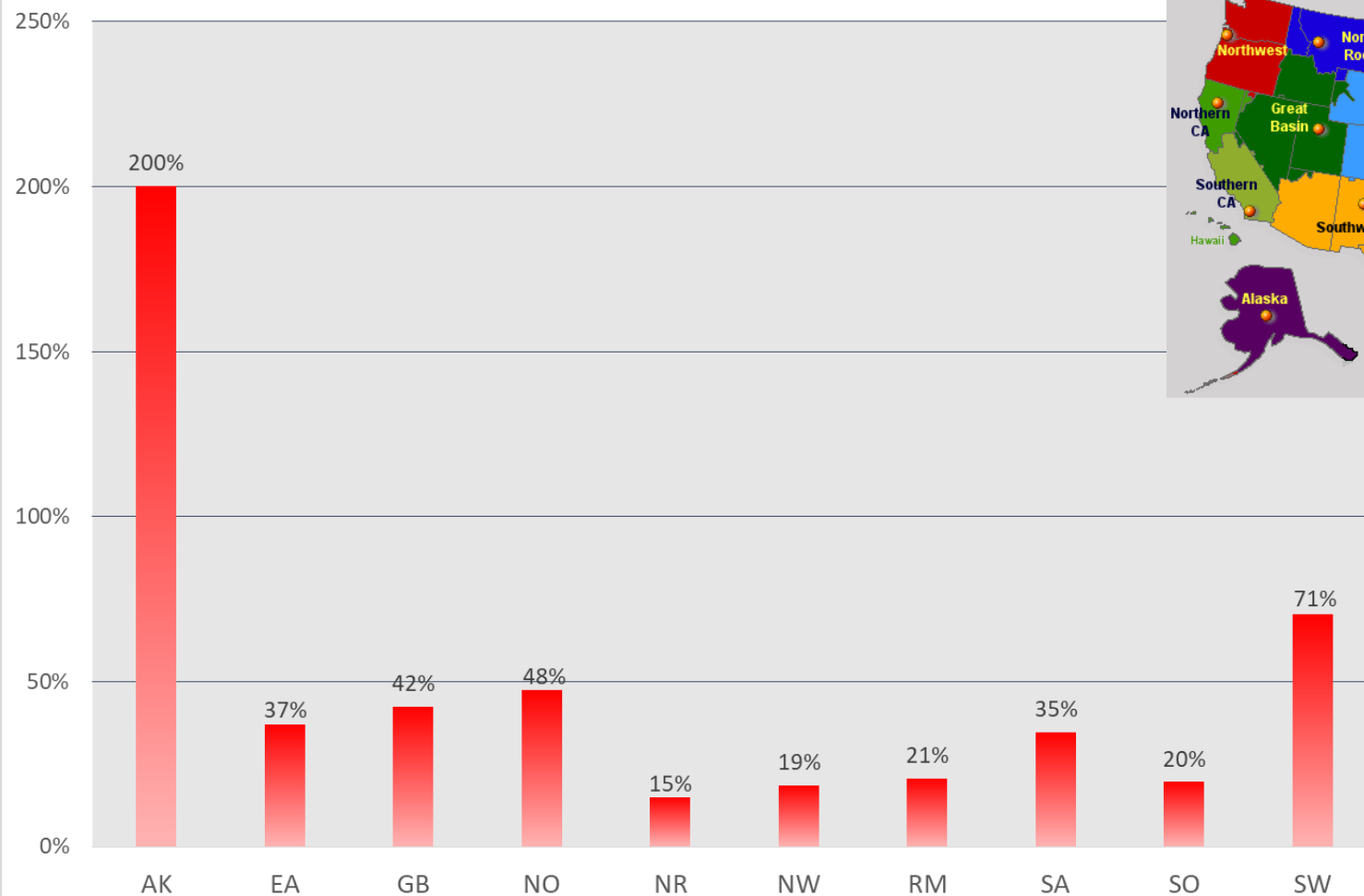


NIROPS requests, 2018 vs 2019



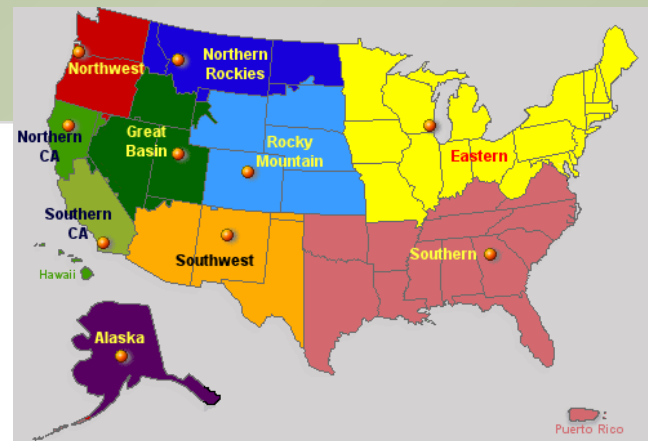
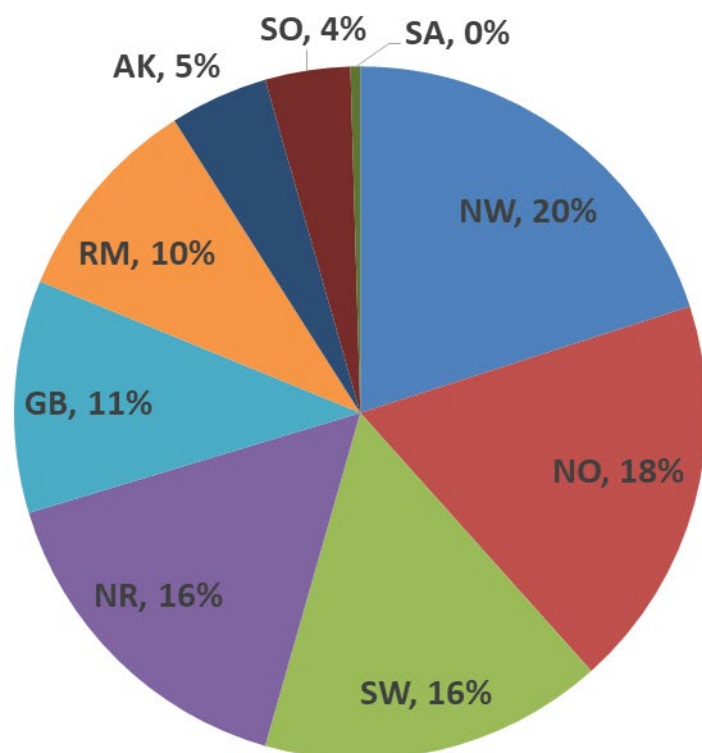
Fire Activity by GACC

Acres Burned by GACC - 2019
(as a percent of each GACC's 10-year average)



2019 – Orders by GACC

Percent of NIROPS orders by GACC



“Busiest” Night – 8/6/19, 16 Fires

● N149Z (14 fires)

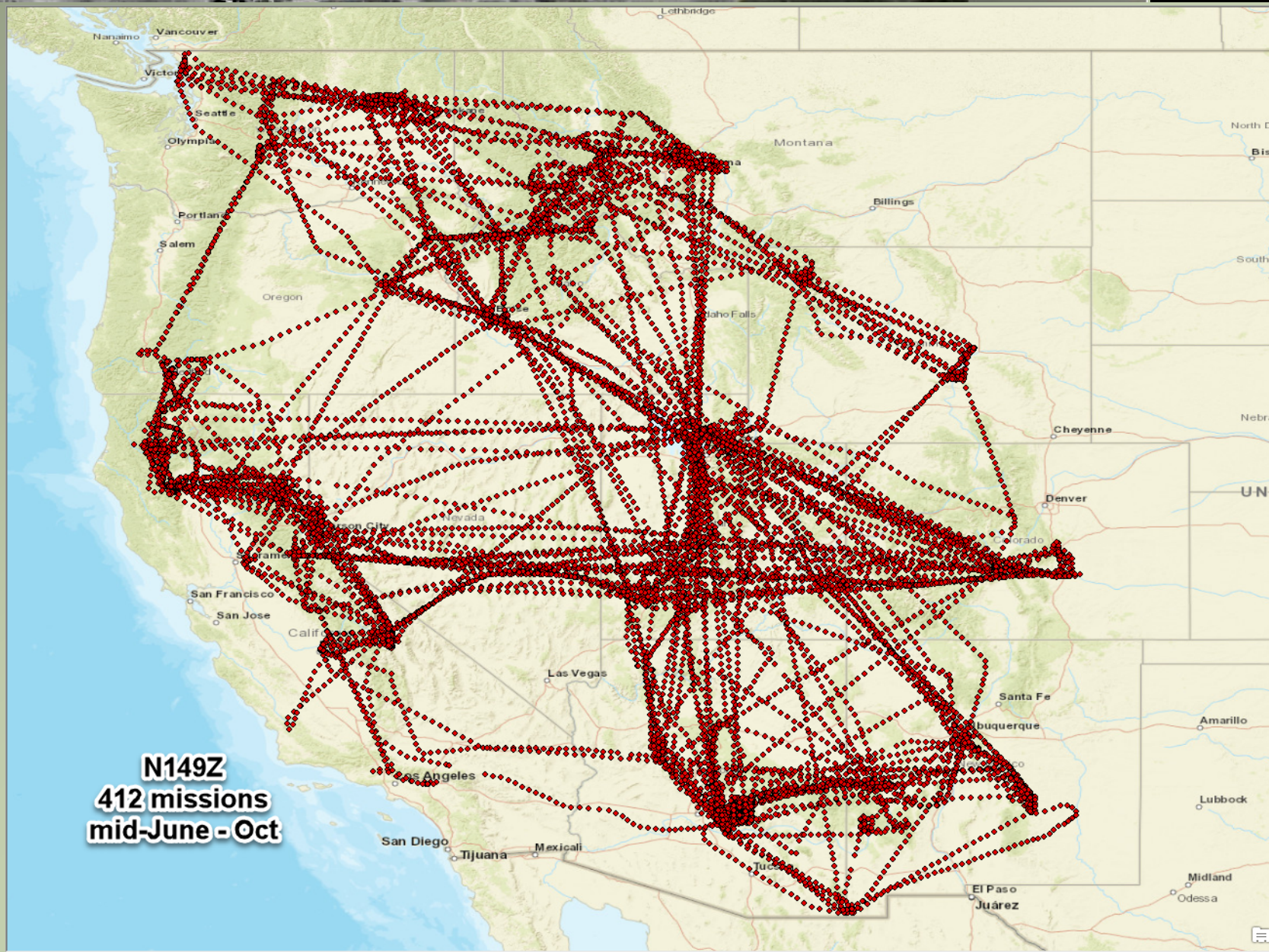
- Horsefly, Snow Creek, Nevada Creek, Beeskove (MT)
- Cove Creek, Nethker, Crab, Ranger, Myers, Wilies, Elbow Bend, Barren Hill (ID)
- Williams Flats (WA)

● Tenax (2 fires)

- East Evans, 163 HK Complex (OR)

2018 Busiest night was 8/23 with 40 fires flown
2017 Busiest night was 9/1 with 48 fires flown

NATIONAL INFRARED OPERATIONS



N149Z
412 missions
mid-June - Oct

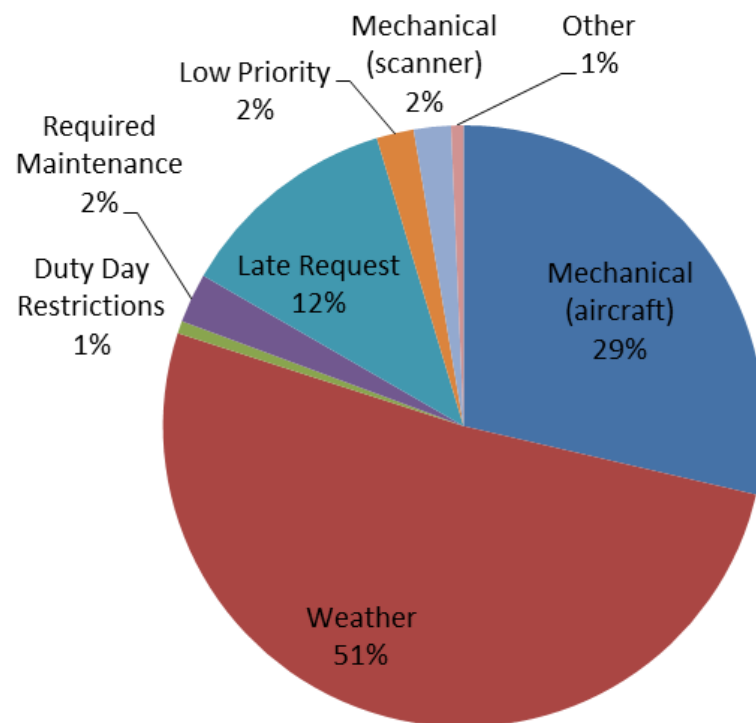


IR Mapping Contract

- Awarded to 5 vendors, only 2 used in 2019
- Contract good thru 2020 fire season
- Tenax flew 40 missions in OR, WA, CA
 - July 25 – Aug 14
- Courtney Aviation flew 1 mission in CA

UTFs (Unable to Fill)

- 150 total UTFs (NIROPS only)
- UTF rate drops from 25% to 13% when weather UTFs are not counted
- UTF for Aircraft 3 - 25% (20% non-weather)

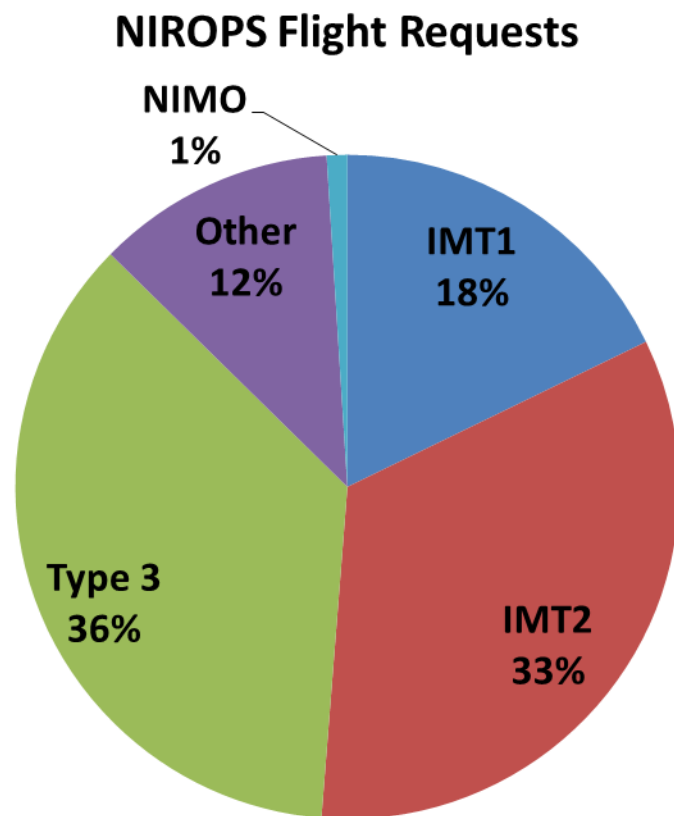


2019 NIROPS UTF Reasons

Who is Requesting?

- 53 orders did not fill out (out of 654)
- Prioritization is key

Team Type	non-weather UTF rate
Other	21%
Type 3	18%
Type 2	5%
Type 1	6%
NIMO	0%



Prioritization of Fires for IR

- Type of team assigned – Type 1, 2, 3, etc.
- Values at risk, WUI, evacuations
- Priority listings in National IMSR
- GACC priority listings
- ★ Geographic location and grouping of fires ★
- Activity during the day
 - Satellite fire detections – MODIS, VIIRS
 - Plume activity – visible satellite
- Consultation with NICC
- Heat detected from previous NIROPS flights
- Expected weather over incident
- Feedback from IRINs

Extended Support to Incidents

- Decker (CO) – 29 flights
- South (CA) – 21 flights
- Woodbury (AZ) – 18 flights
- Swan Lake (AK) – 16 flights
- Taboose (CA) – 15 flights
- Beeskove (MT) – 12 flights
- Middle (CA) – 12 flights

Quirks of a Slow Season

- On Aug 19, five orders in NIROPS, all filled
- All were in different GACCs
 - Sheridan – SW
 - Granite Gulch – NW
 - Nethker – GB
 - Horsefly – NR
 - Swan Lake – AK (AC3)





Quirks of a Slow Season

- Small fires - “if you’re not doing anything else...”
- Lots of requests for fires less than 100 acres down to a few acres
- Typically located near a larger fire - target of opportunity
- Still have inappropriate/inefficient uses of NIROPS for isolated heat mapping

It Takes a Team!

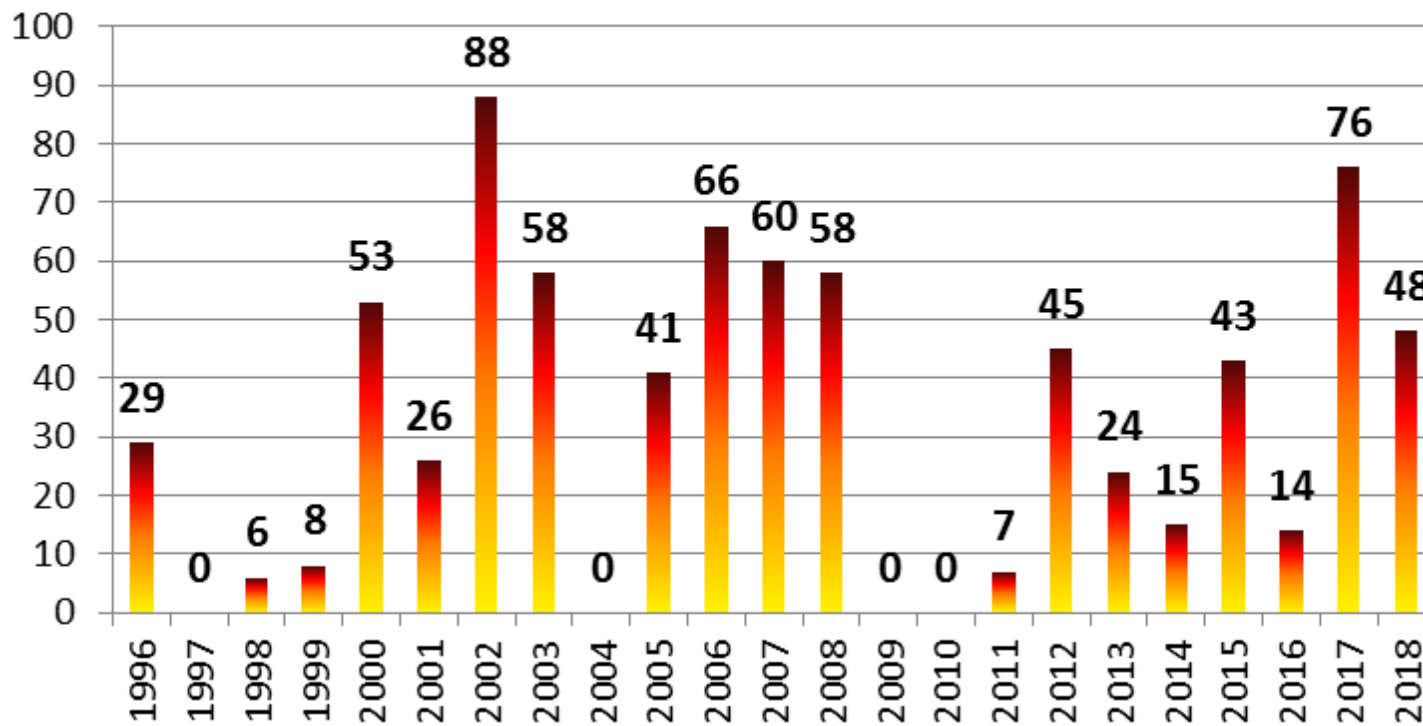
- IR Techs - 10 person rotation including 4 new trainees
- Pilots – 3 FS fulltime
- 22 different IRINs, 1 trainee got assignment
- Vendors – Tenax and Courtney Aviation
- National IR desk never activated
- Aircraft 3 (Firehawk) coverage key during maintenance on NIROPS aircraft and AK support - AC3 liaison at GTAC and NGA analysts
- R4 Aviation maintenance crew
- Fire Imaging Program Manager key for interacting with vendors and briefing GACCs and IMTs on IR options

Takeaways from 2019

- Vendor support helped esp. with only one plane
- Planes are getting older every year!
 - 149Z – 35 years old (1985)
 - 144Z – 19 years old (2001)
- Coordination with other IR resources is key
 - DRTI, MMA, Owyhee Air, AA51, FS Cobras
 - Can sometimes reduce NIROPS requests
- We got lucky!

Next Year?.....

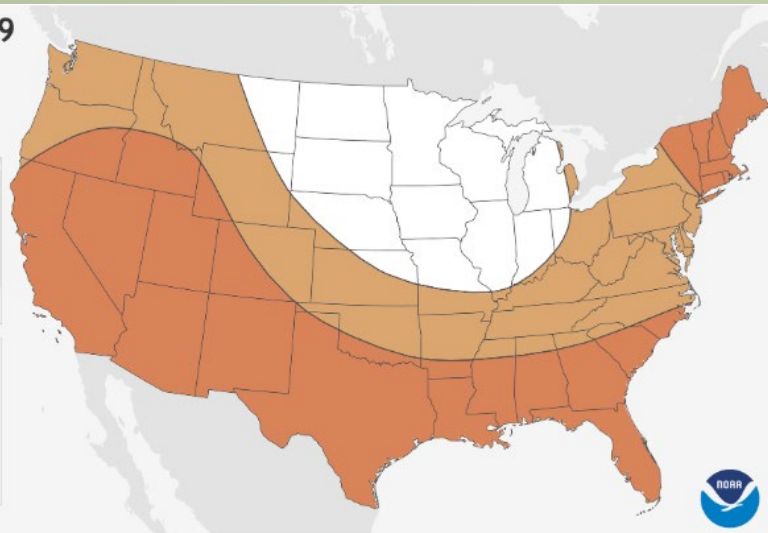
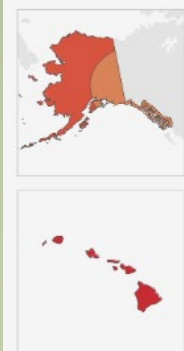
Days at National PL 4 or 5



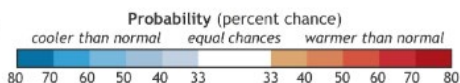
Looking ahead to 2020

- Neither El Niño or La Niña
- Short-term climate patterns like the Arctic Oscillation will drive winter weather with potential for large swings in temps and precip.

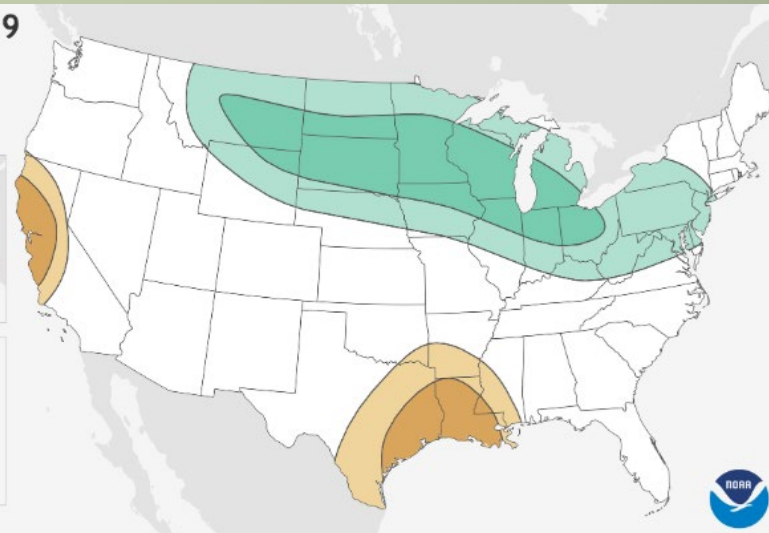
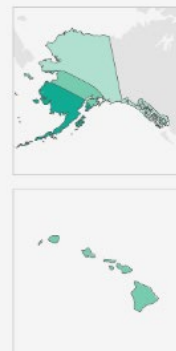
Winter 2019
U.S.
Temperature
Outlook



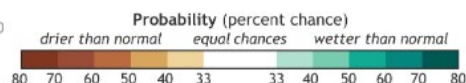
Temperature Outlook
for December 2019 – February 2020
Issued 17 October 2019



Winter 2019
U.S.
Precipitation
Outlook



Precipitation Outlook
for December 2019 – February 2020
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Get ready for next year!

Magalia

Pulga

Paradise

Camp Fire, 1754 PDT, Nov 8, 2018
Growth of 54,586 ac in 11.5 hours
from ignition

