



United States Department of Agriculture

# *Translocated HY RTHA Movements*

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1984 - Raptor translocation at airports appears to have started at Pearson Int'l Airport, Toronto, Canada (Wernaart and McIlveen 1990)

1998 - The first RTHA translocated from airports in the United States (that I know about) was accomplished by WS biologists at ORD and a local raptor rehabilitator (3 RTHA in October)

1999 - I took over the ORD program and translocated >70 RTHA that year using colored anodized and alpha-numeric bands to help track returns.



2000 - The FAA funded the first raptor translocation efficacy project, at ORD

2000 - The 1<sup>st</sup> of 24 satellite tagged RTHA was translocated from ORD in June



2008 into 2015 – Airport-specific bumblebee bands for ~ 3,900 raptors (15 spp) in 16 states, authorized by the BBL

## Managing Raptor-Aircraft Collisions on a Grand Scale: Summary of a Wildlife Services Raptor Relocation Program

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USDA APHIS Wildlife Services

**Brian E. Washburn**

USDA APHIS WS National Wildlife Research Center

Proc. 27<sup>th</sup> Vert. Pest Conf. (R. M. Timm and R. A. Baldwin, Eds.)

Published at Univ. of Calif., Davis. 2016. Pp. 248-252.



## Returns

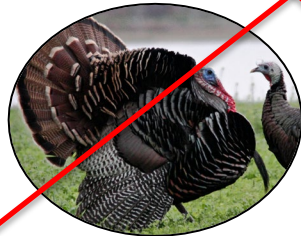
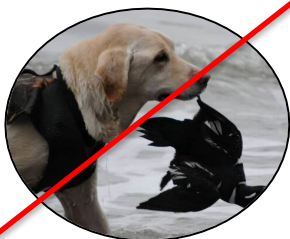
### Age

25.6%  
(31/121)



3.2%  
(3/93)

## Seasons



## Distance



## Direction



## Time consuming



## Expensive



## Frustrating



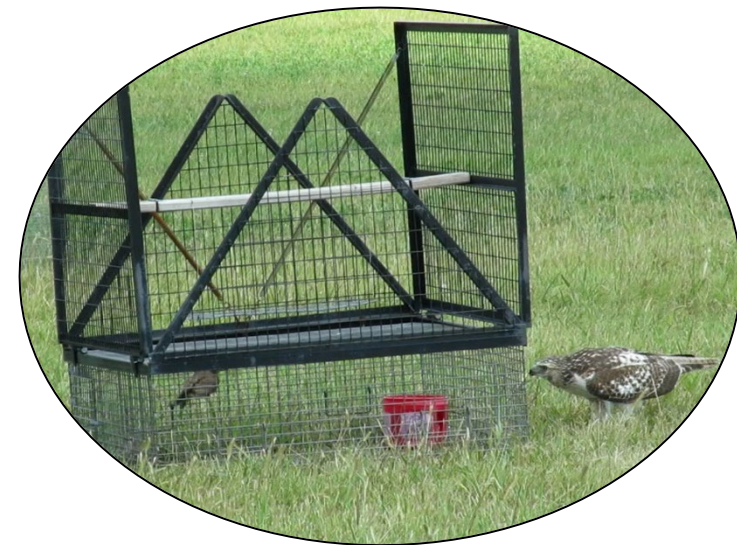
## Young



## Migrants



## Are HY birds surviving the translocation?





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# *Translocated 7 Local HY RTHA*

27 June to 11 Aug 2023 - Translocated 7 volunteers 52 miles southwest



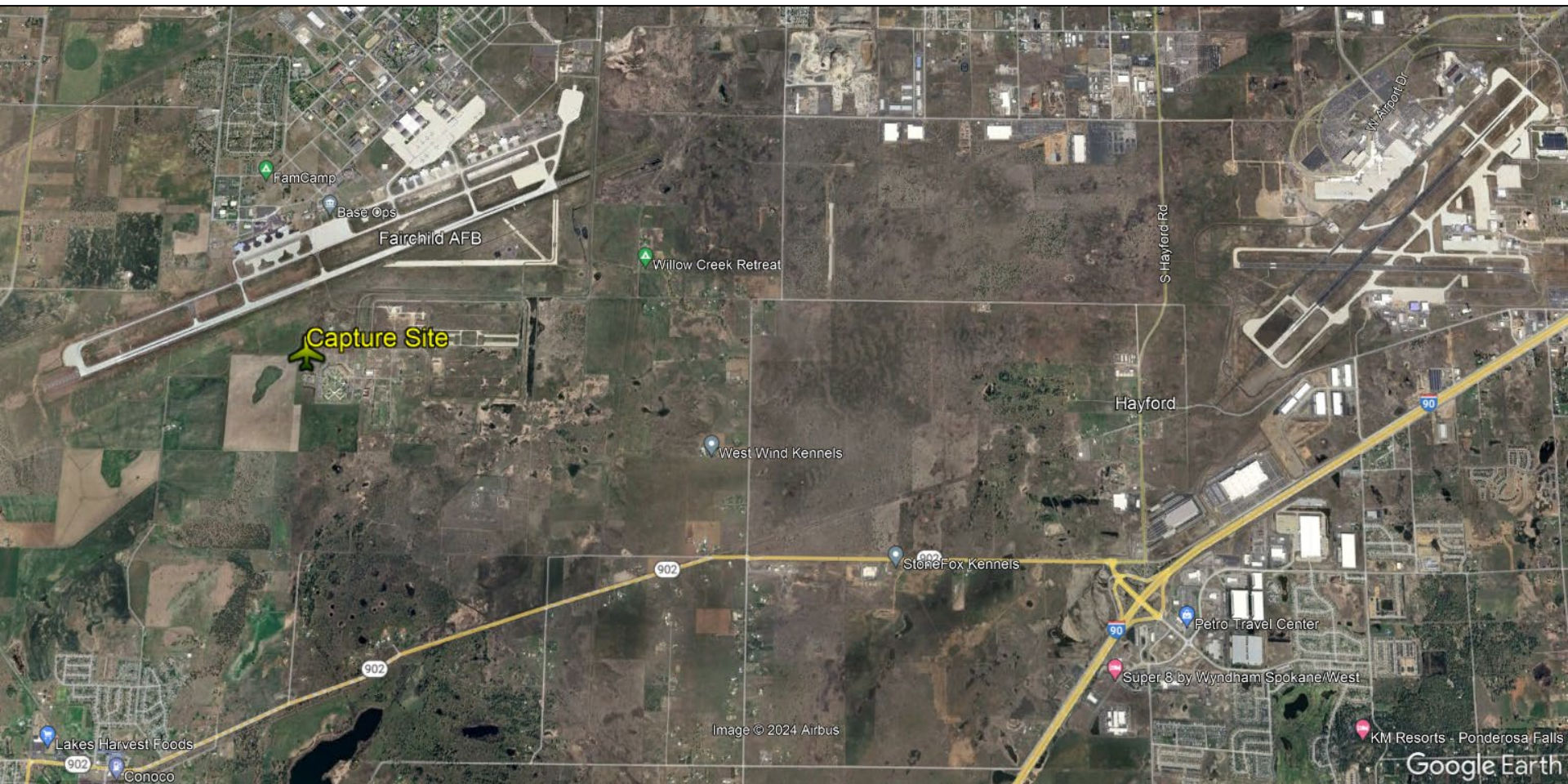
July to Aug 8 2024 - Translocated another 15 volunteers 20-30 miles





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# Captured near FAFB



## Wildlife Services

Protecting People ♦ Protecting Agriculture ♦ Protecting Wildlife



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*Released ~52 miles SW*



**Wildlife Services**

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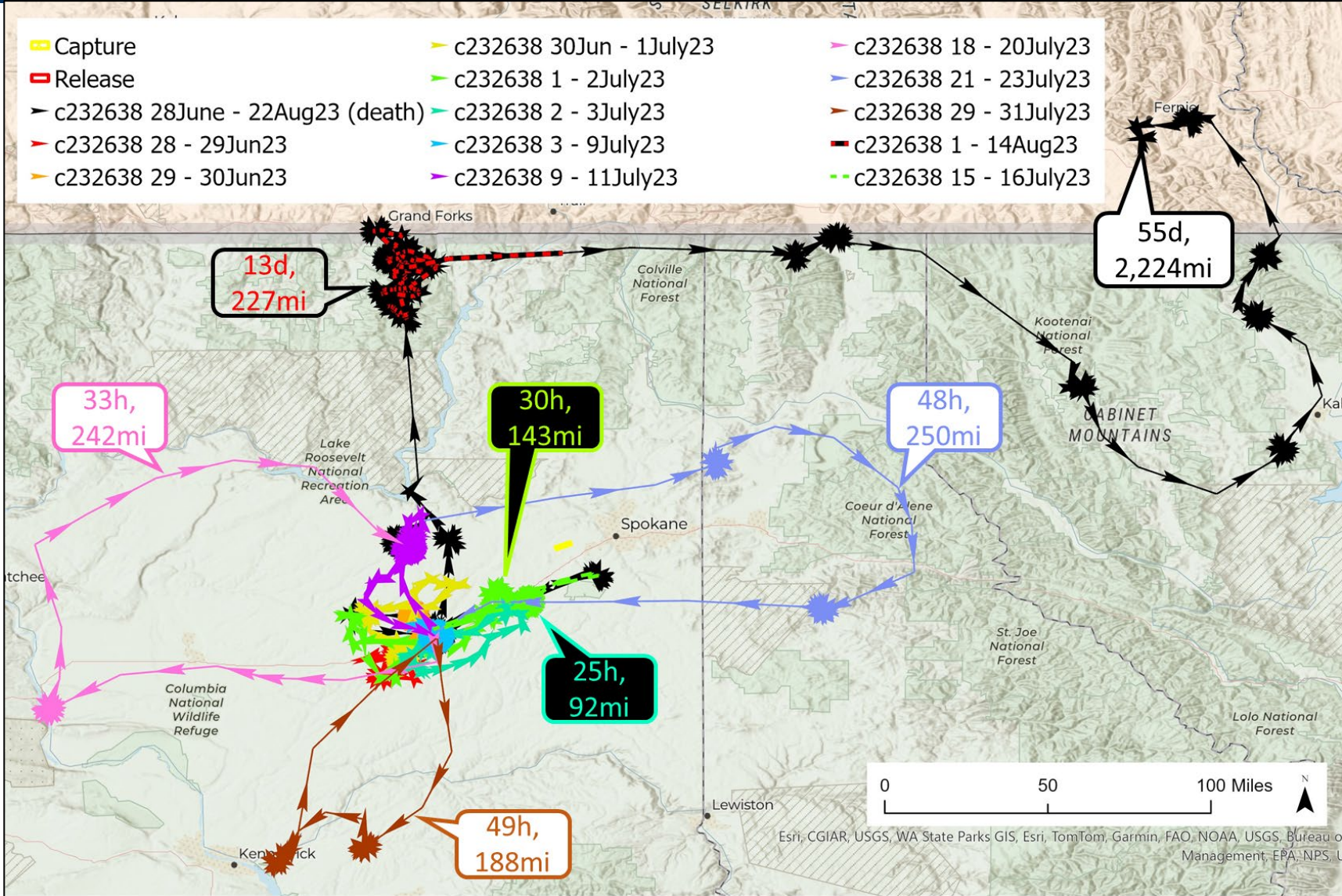


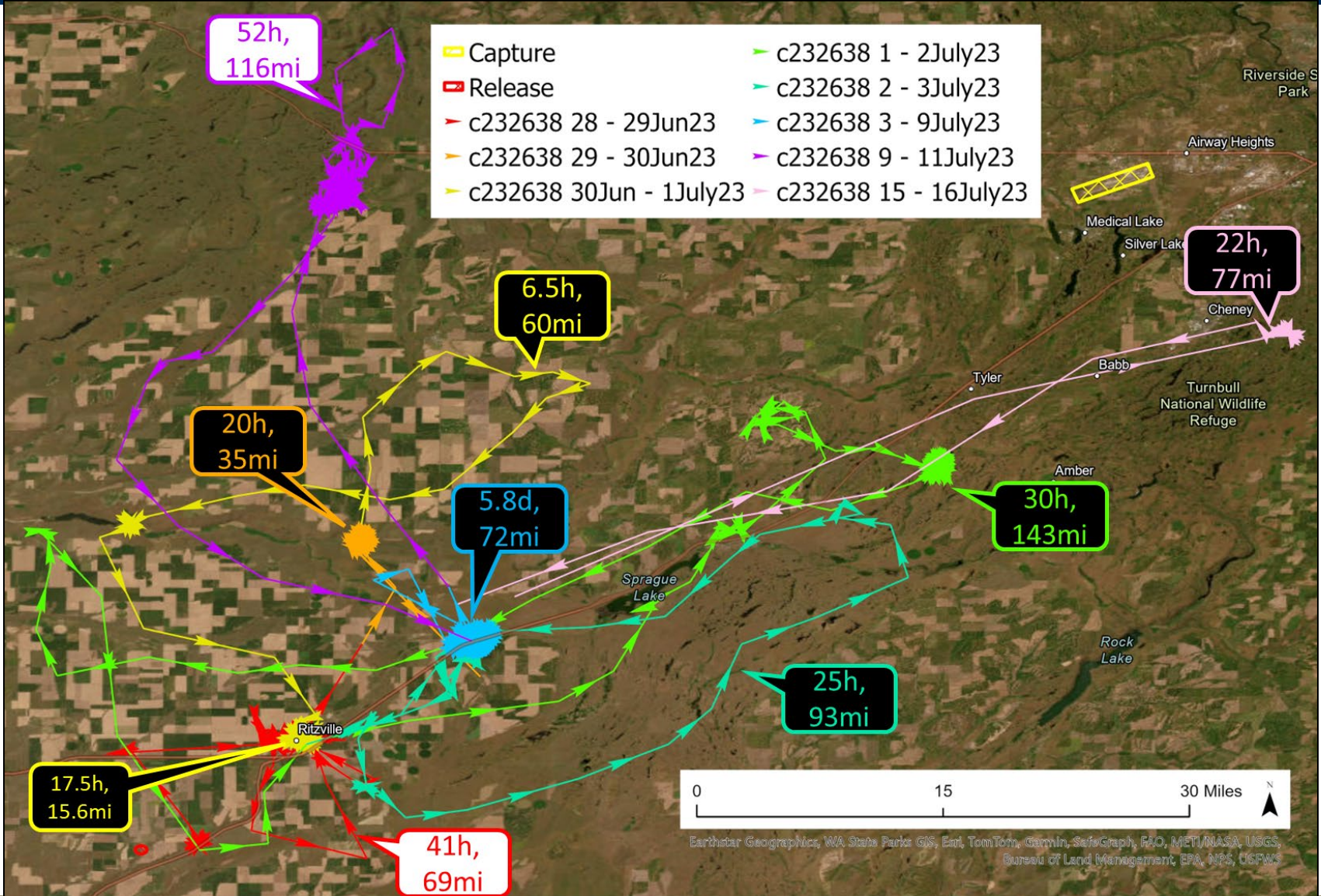
# Transmitter Settings

Setting	Out of zones	Geofence zone 1	Geofence zone 2
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GPS fix interval 0..172800 seconds, 0 - invalid value in GF1 and GF2	15 min <input type="text" value="900"/>	<input type="text" value="900"/>	<input type="text" value="900"/>
GPS fix interval when battery less than 75% 0 - setting disabled, 1..172800 seconds	<input type="text" value="3600"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
GPS fix interval when battery less than 50% 0 - setting disabled, 1..172800 seconds	<input type="text" value="14400"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
GPS fix interval when battery less than 25% 0 - setting disabled, 1..172800 seconds	<input type="text" value="28800"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
GPS sleep interval 0..21600 seconds	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
Enable GPS sleep 0 - disabled, 1 - enabled	<input type="text" value="Enabled"/>	<input type="text" value="Disabled"/>	<input type="text" value="Disabled"/>
GPS sleep from dusk -18..18 - sun angle	<input type="text" value="-6° (UTC 04:23)"/>	<input type="text" value="0° (UTC 03:42)"/>	<input type="text" value="0° (UTC 03:42)"/>
GPS sleep till dawn -18..18 - sun angle	<input type="text" value="-13° (UTC 11:19)"/>	<input type="text" value="0° (UTC 12:55)"/>	<input type="text" value="0° (UTC 12:55)"/>



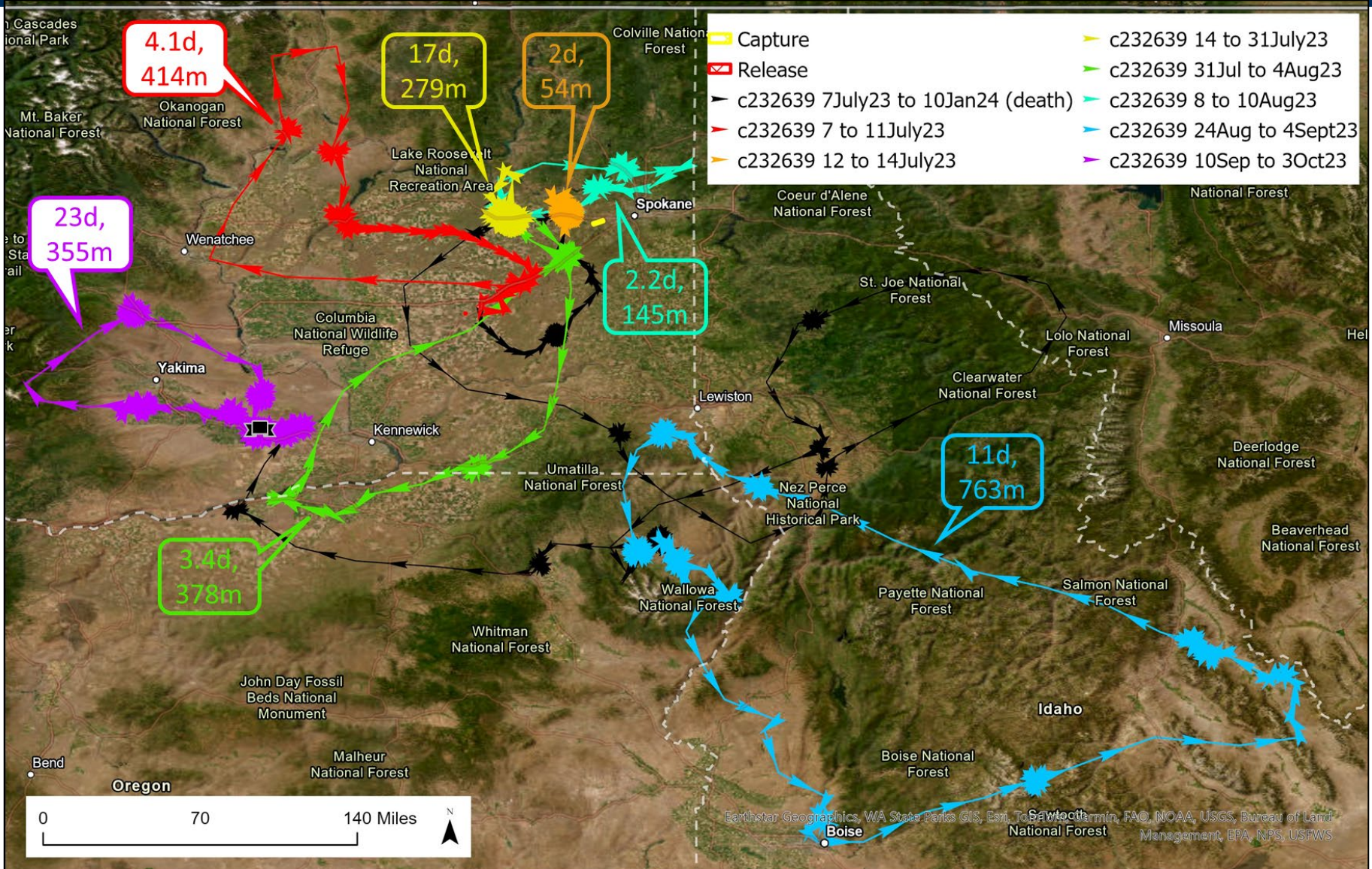
# 55 days, 2,224 miles



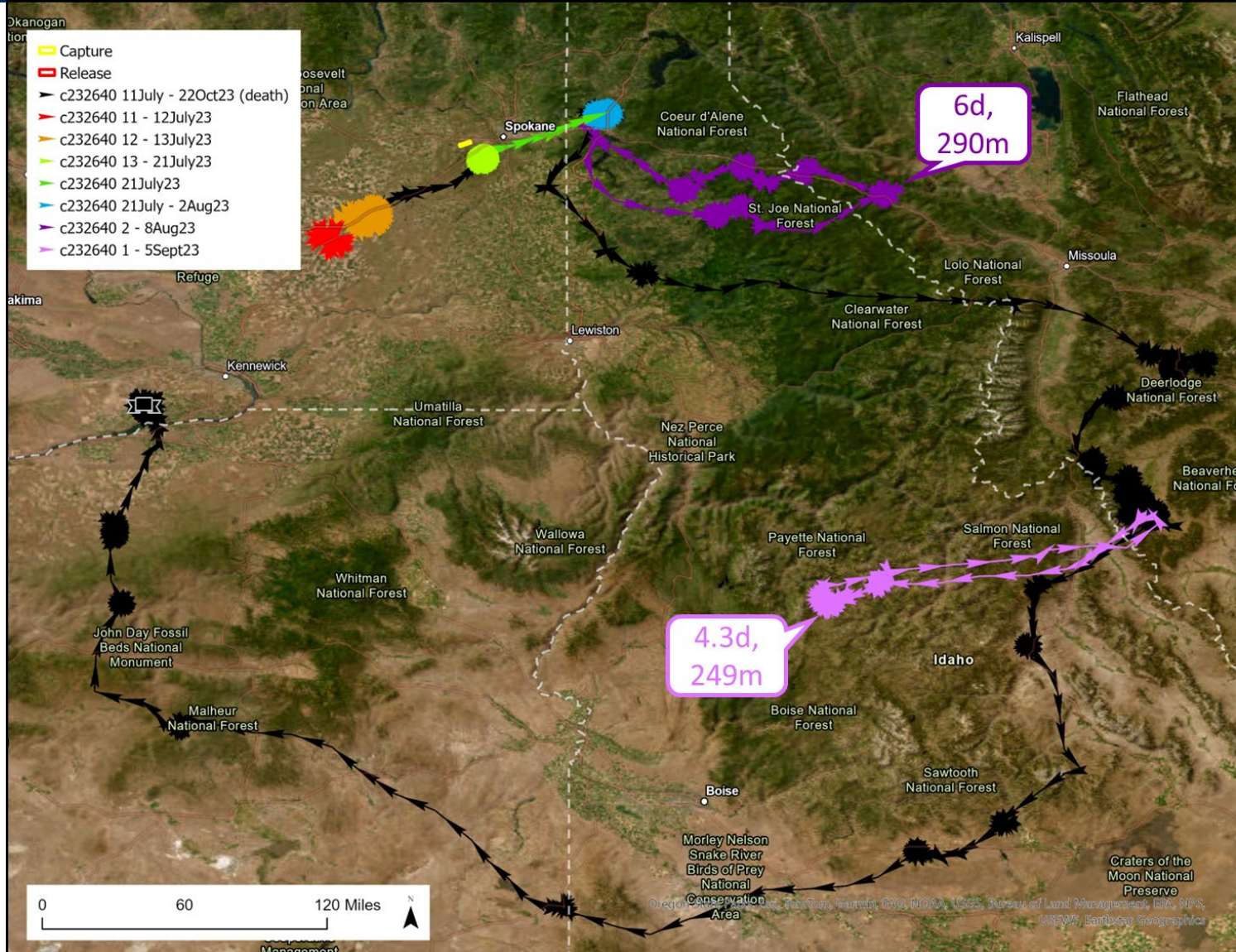


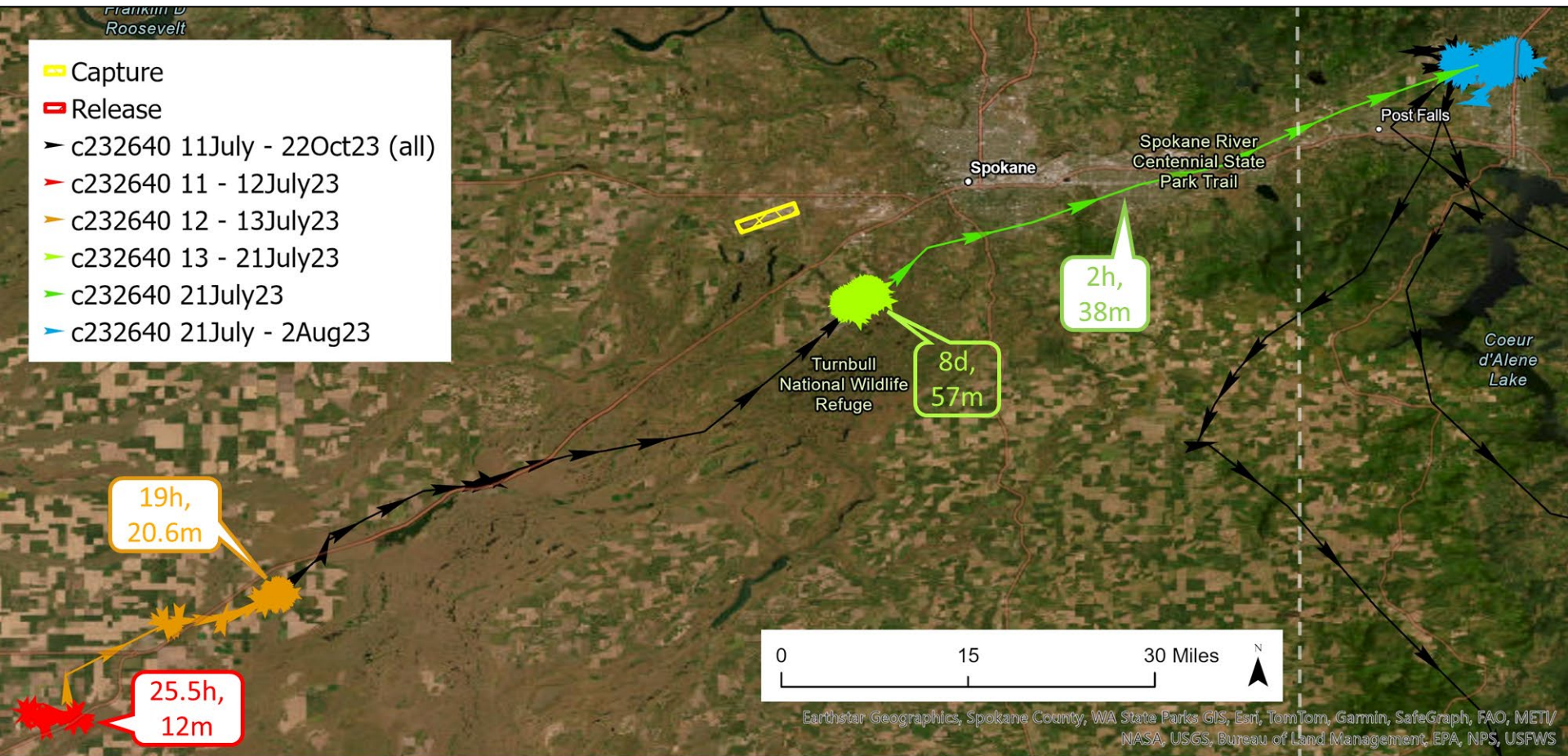


# 187 days, 3,647 miles



- ▶ Capture
- ▶ Release
- ▶ c232639 7July23 to 10Jan24 (death)
- ▶ c232639 7 to 11July23
- ▶ c232639 12 to 14July23
- ▶ c232639 14 to 31July23
- ▶ c232639 31Jul to 4Aug23
- ▶ c232639 8 to 10Aug23
- ▶ c232639 24Aug to 4Sept23
- ▶ c232639 10Sep to 30Oct23





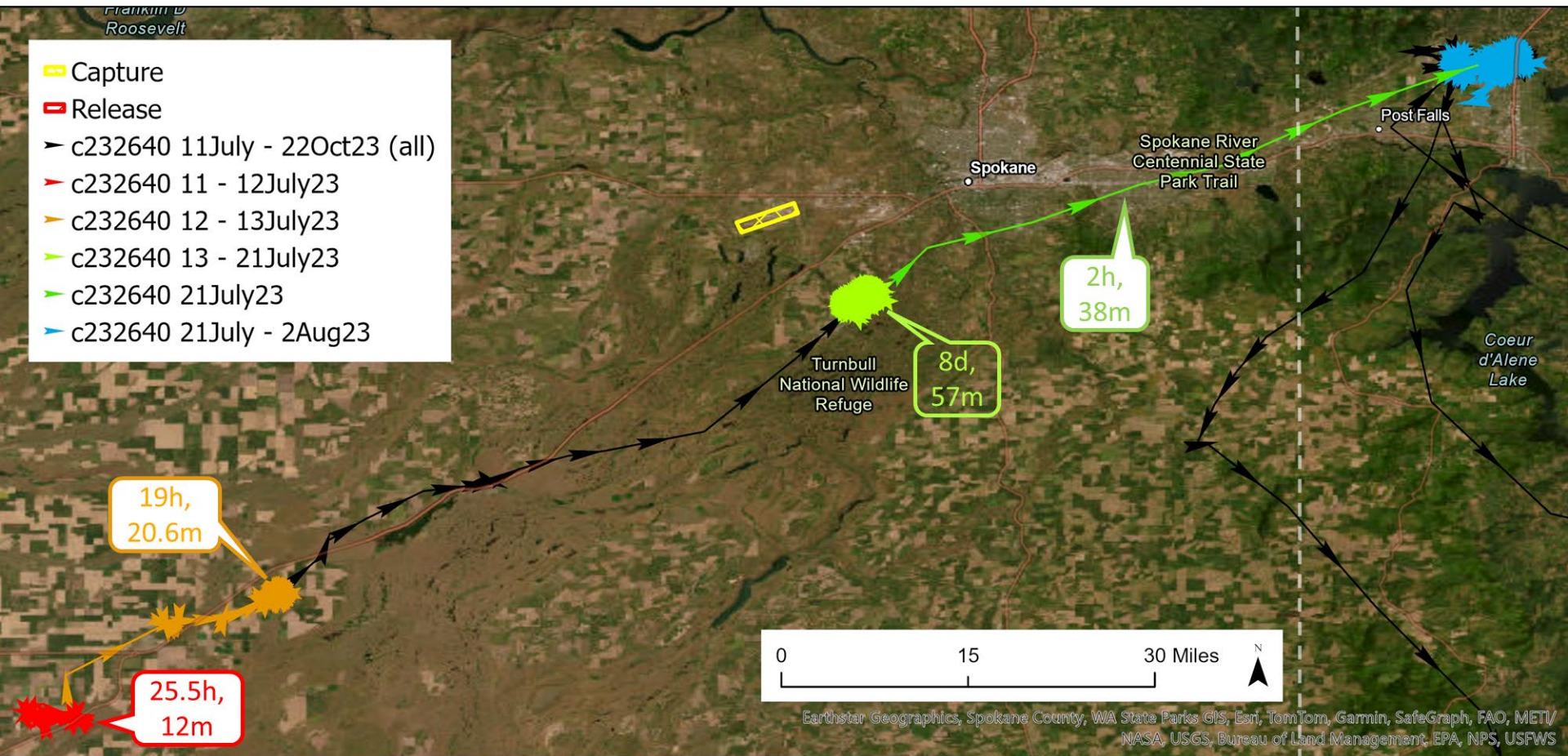


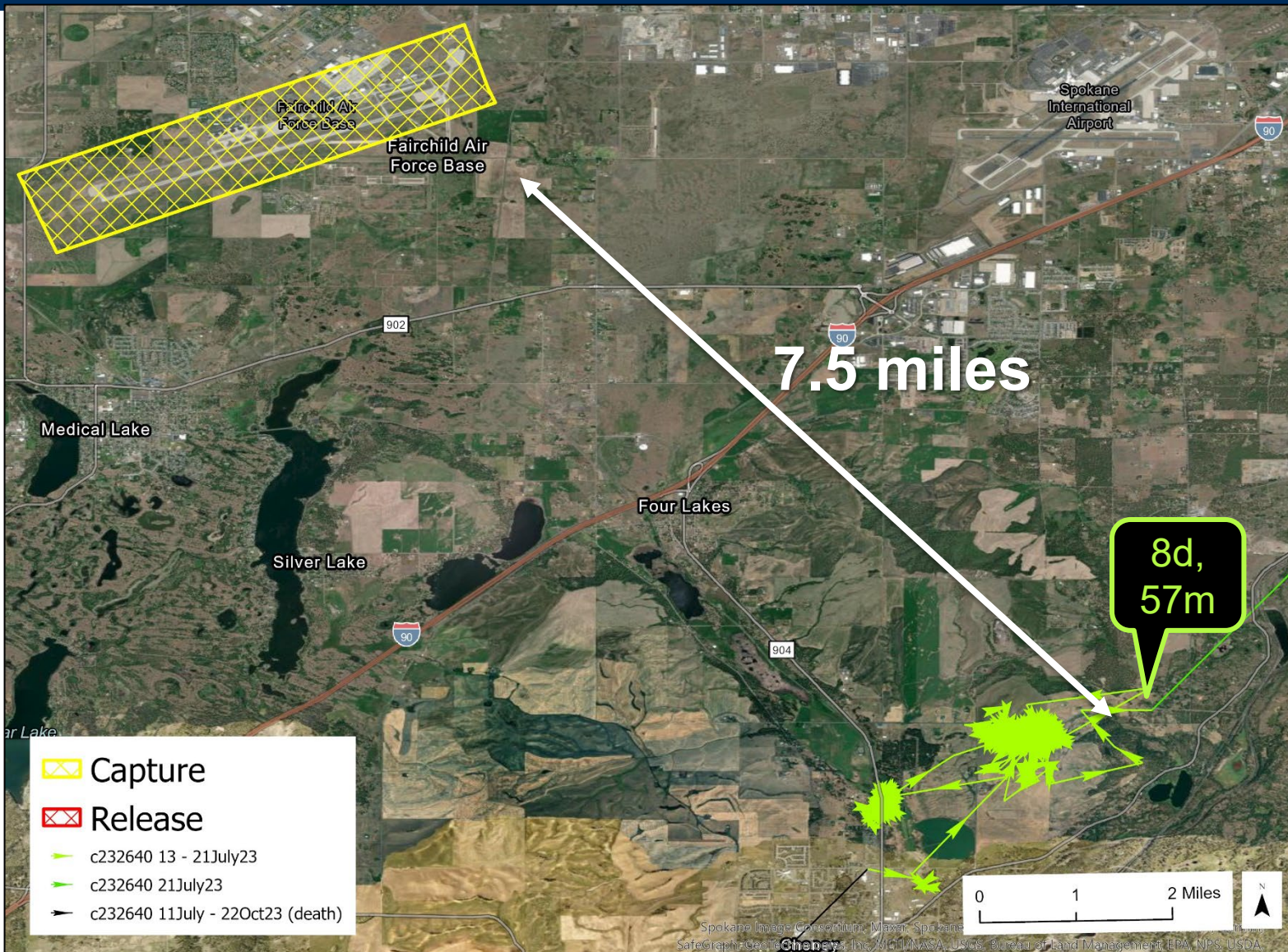


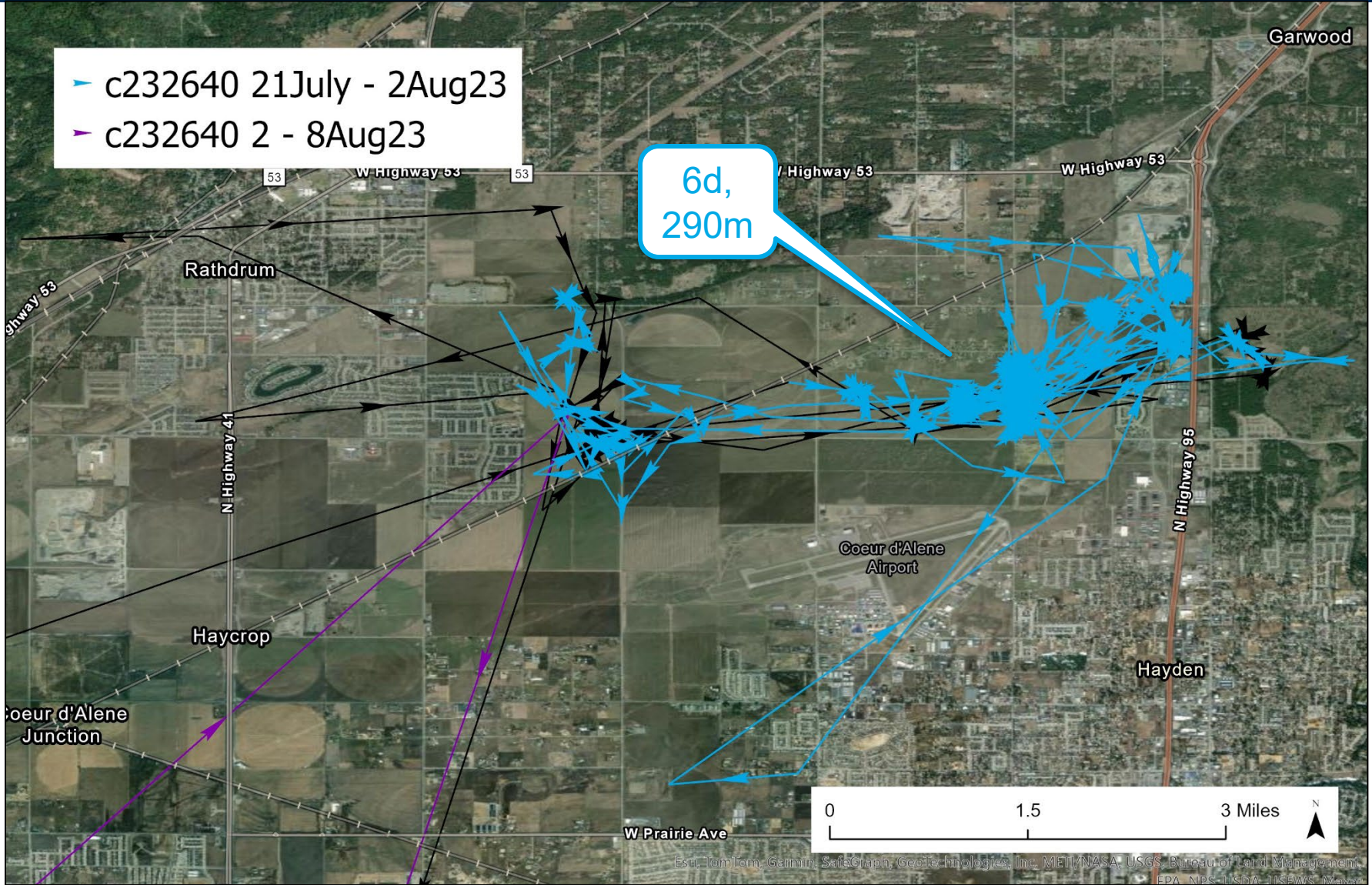
- Capture
- Release
- c232640 11July - 22Oct23 (all)
- c232640 11 - 12July23
- c232640 12 - 13July23

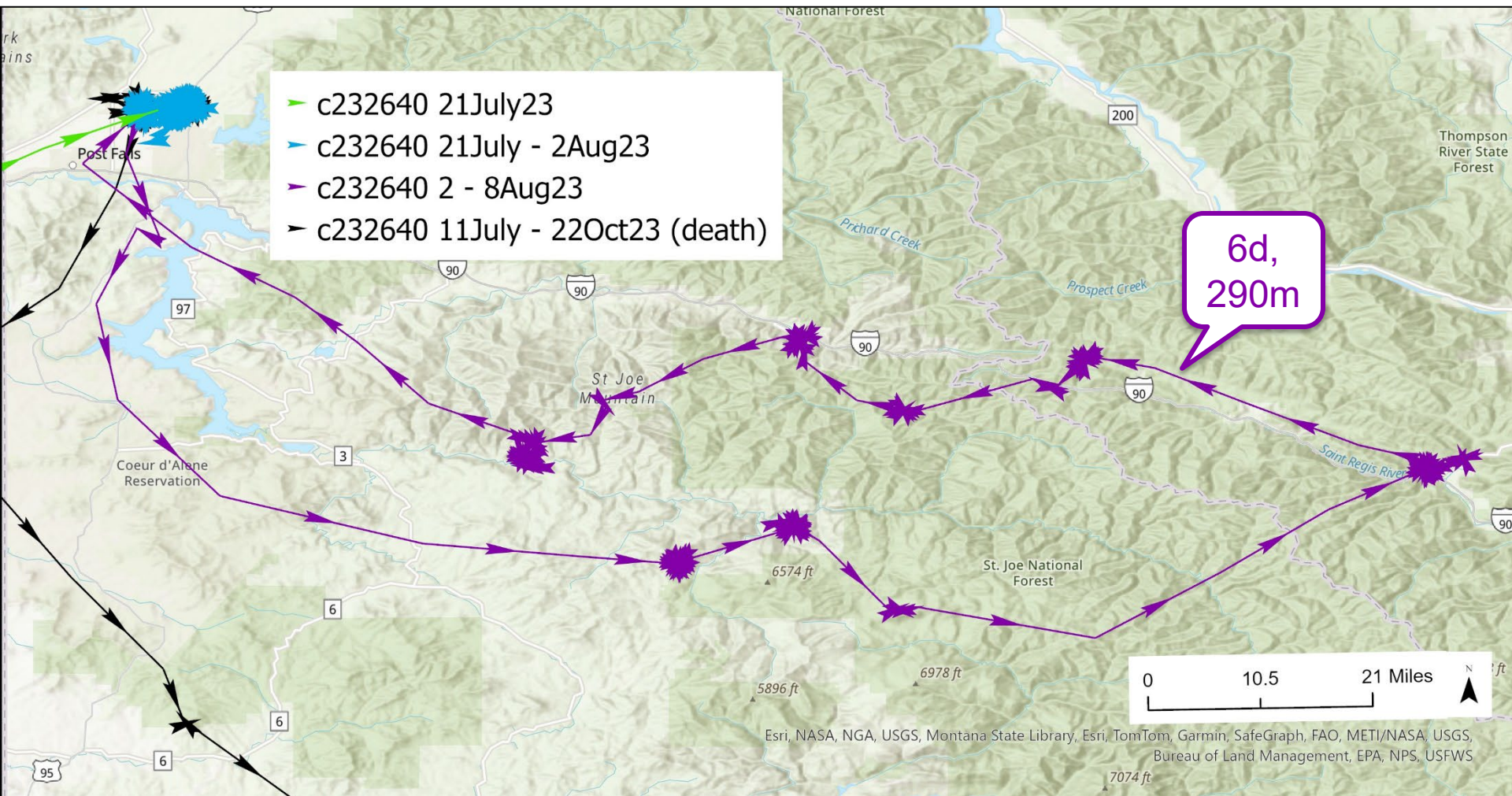


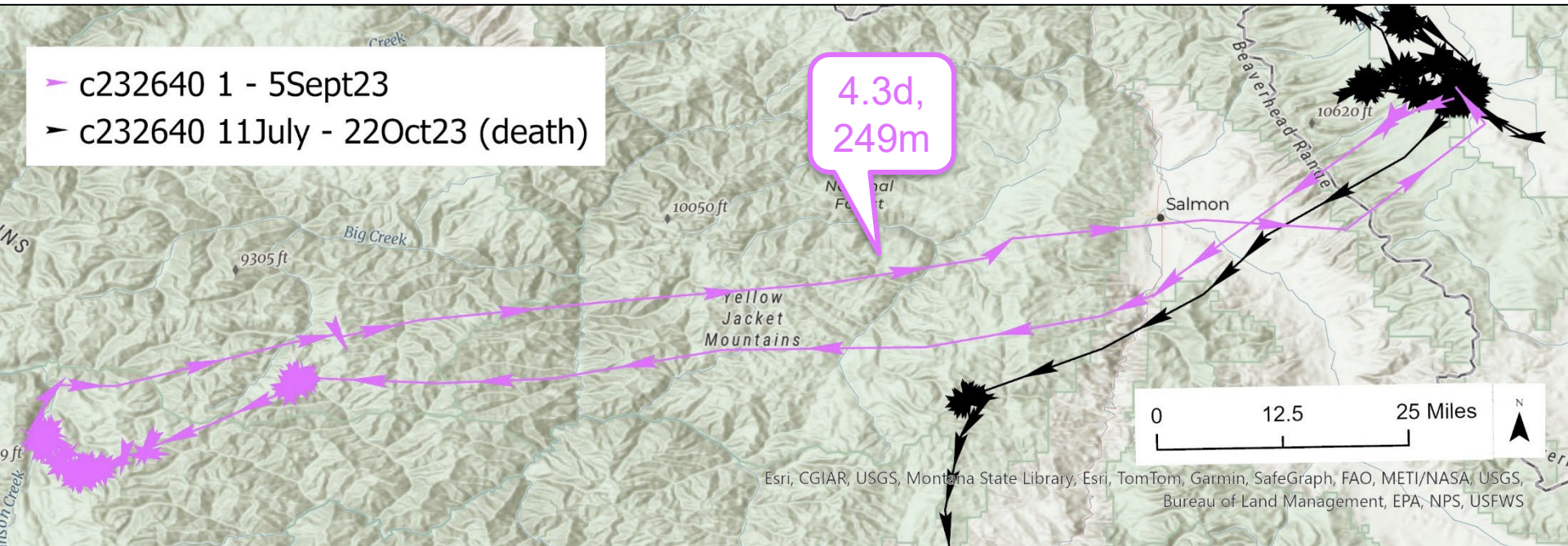
Earthstar Geographics, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS



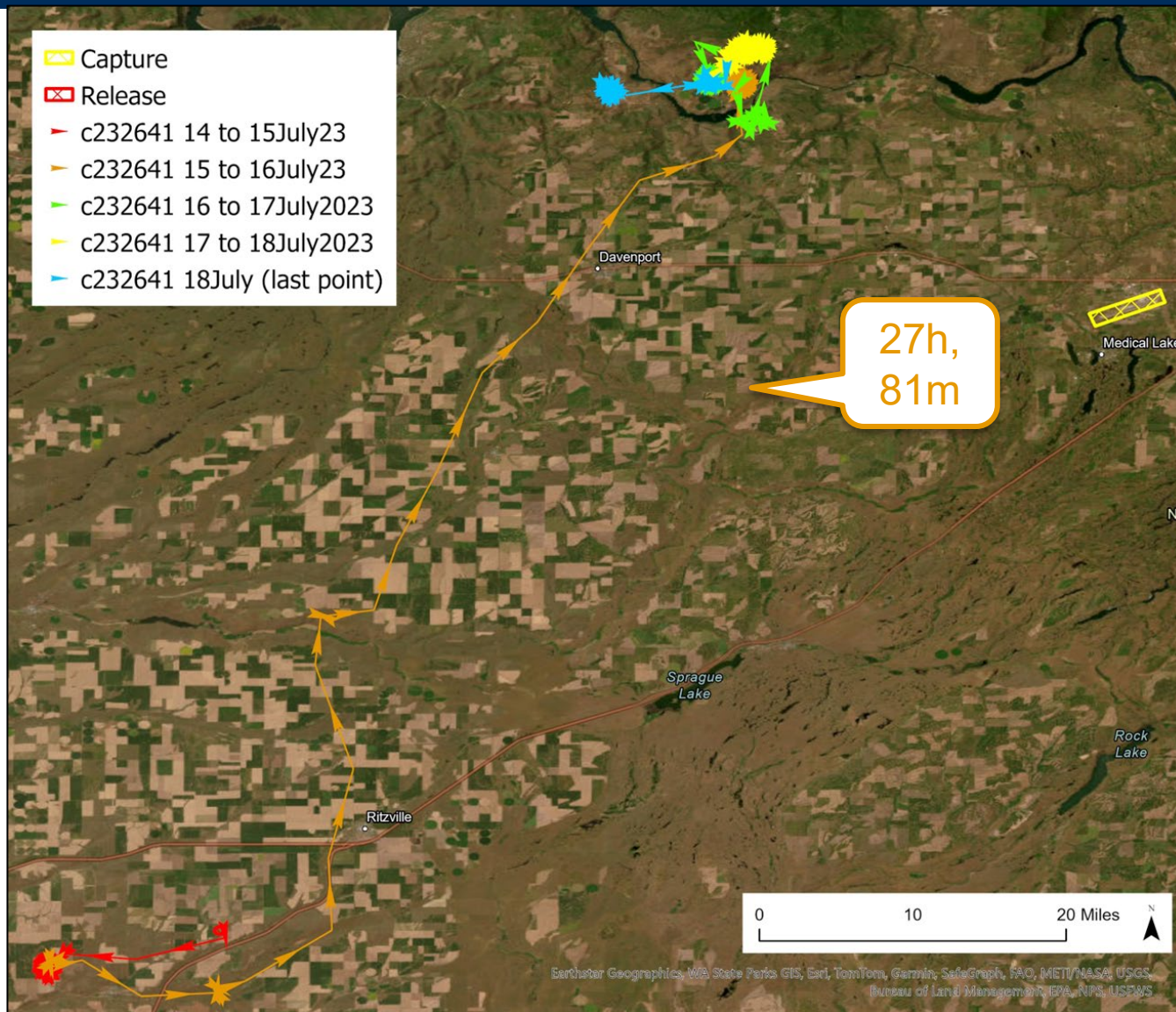








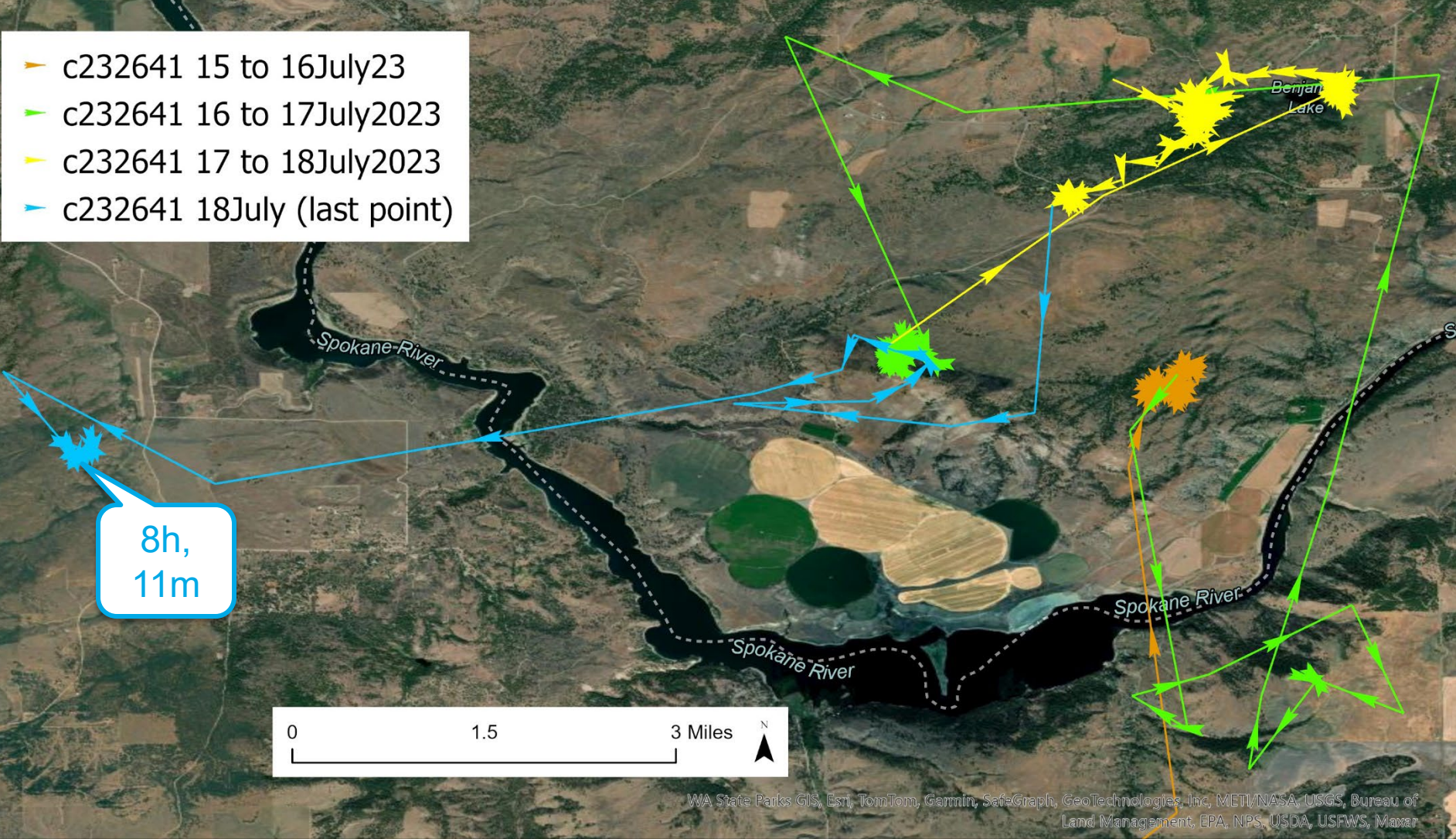




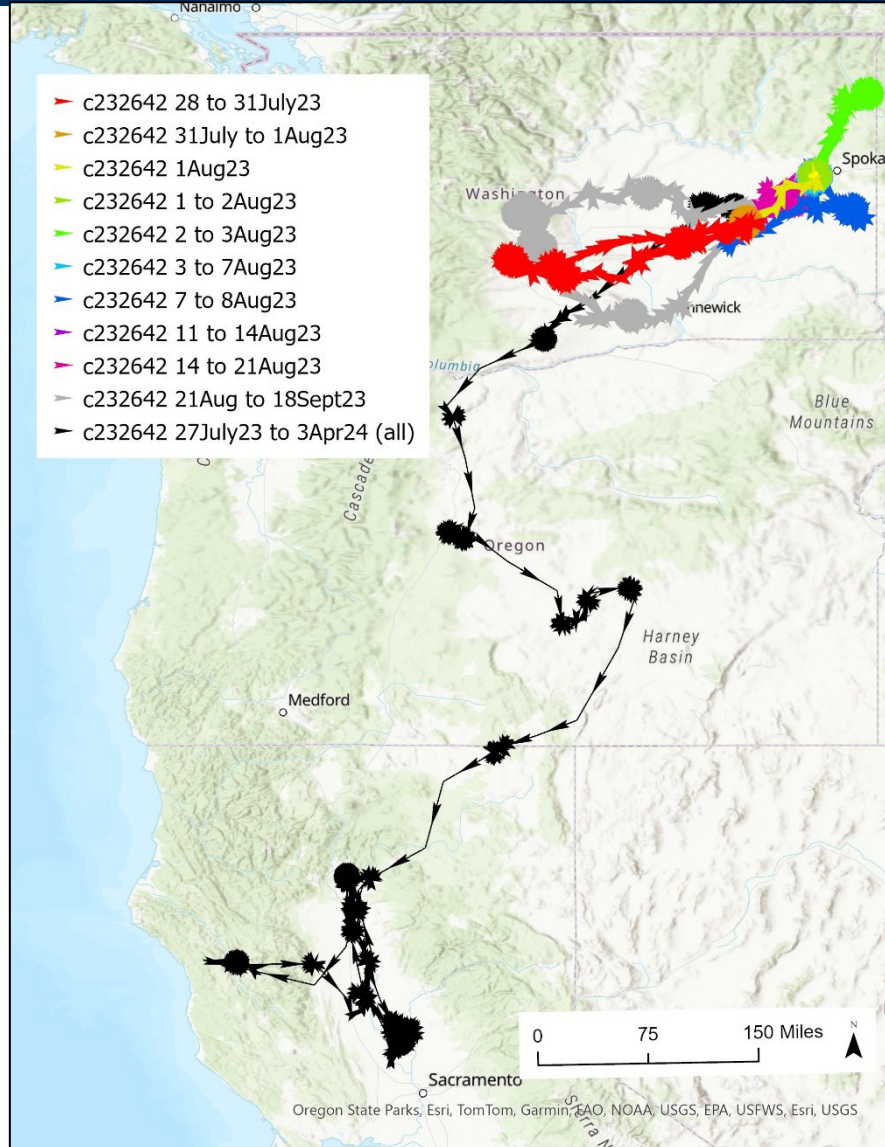


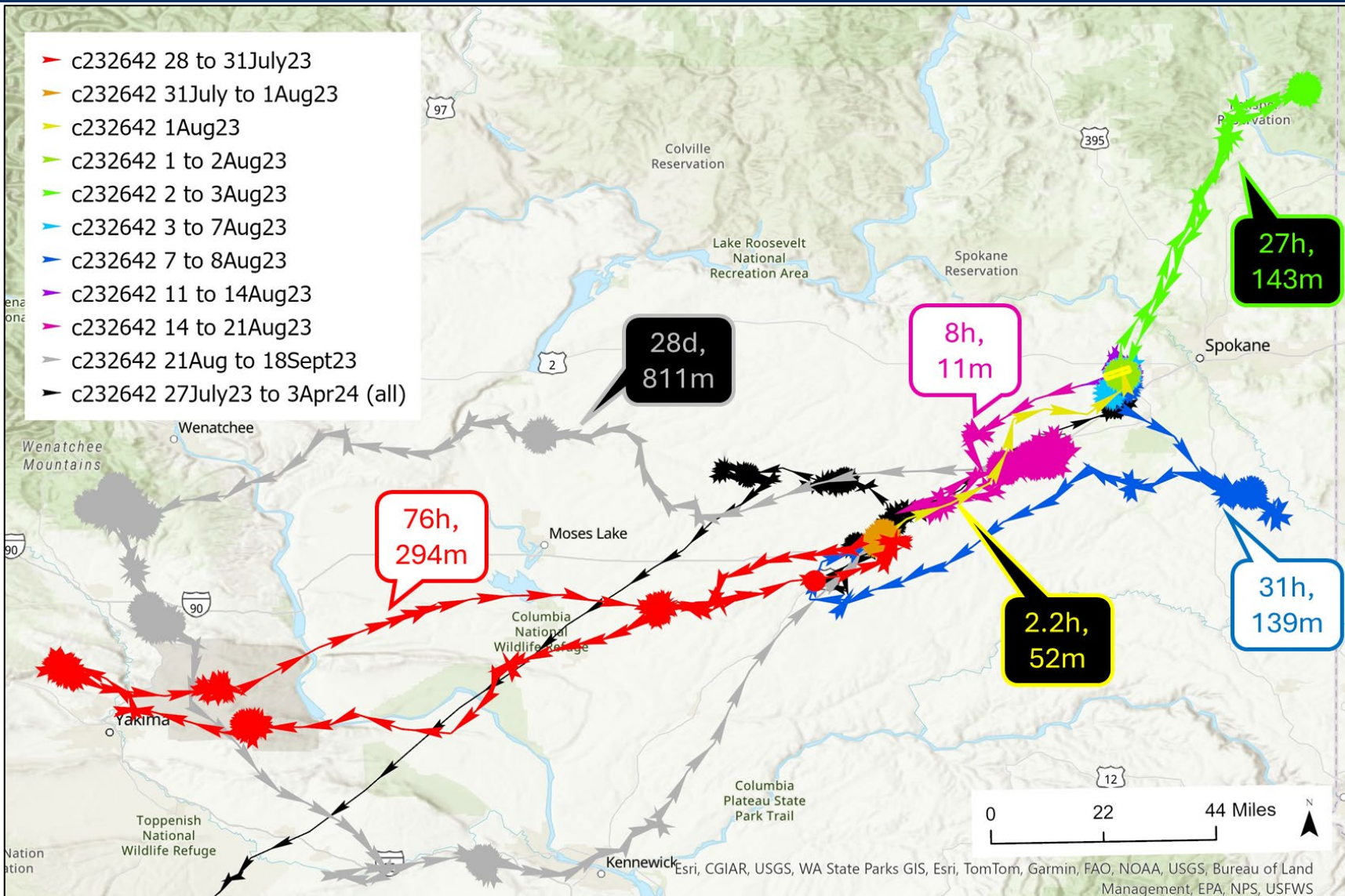


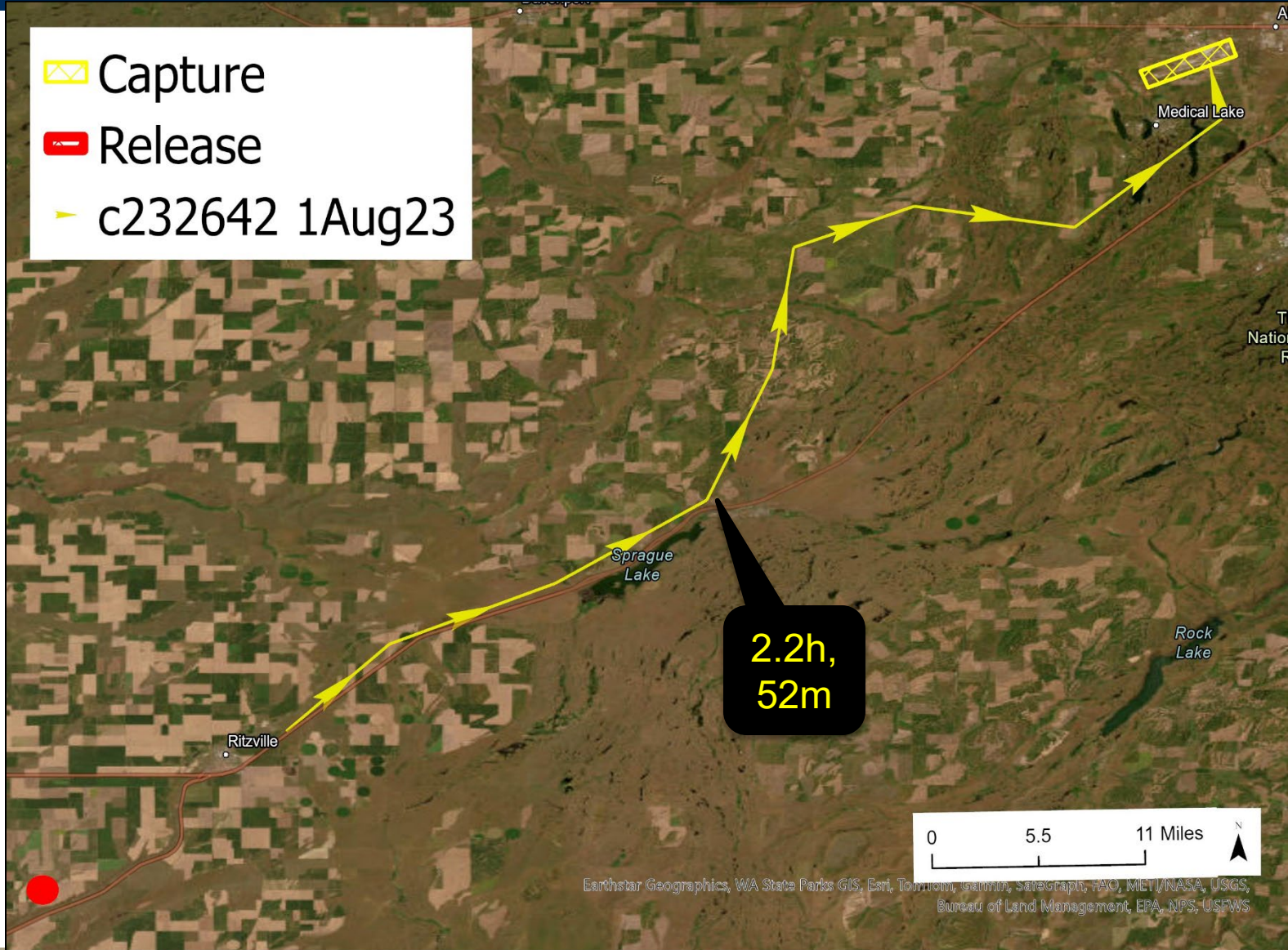
- c232641 15 to 16 July 23
- c232641 16 to 17 July 2023
- c232641 17 to 18 July 2023
- c232641 18 July (last point)

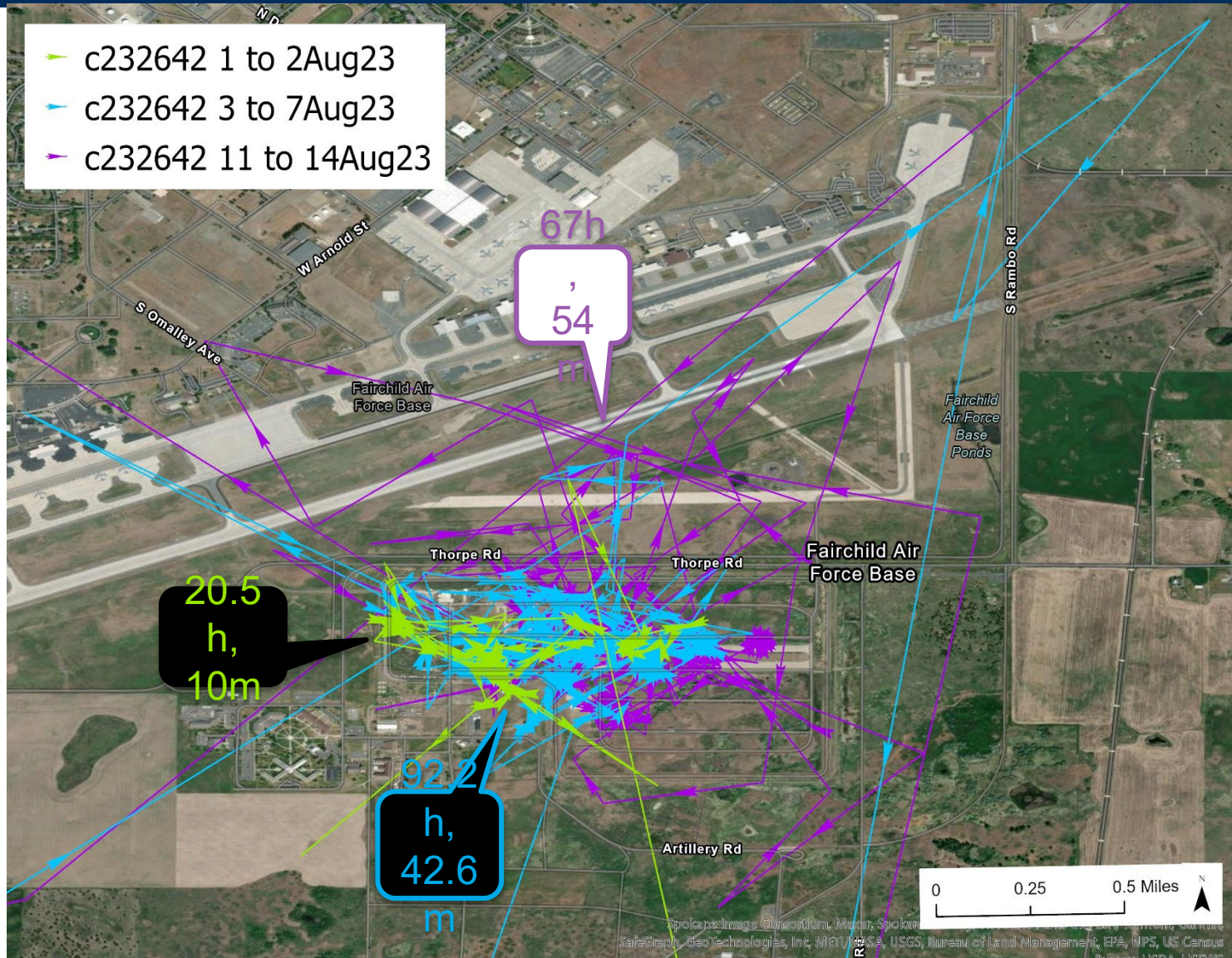


WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS, Maxar





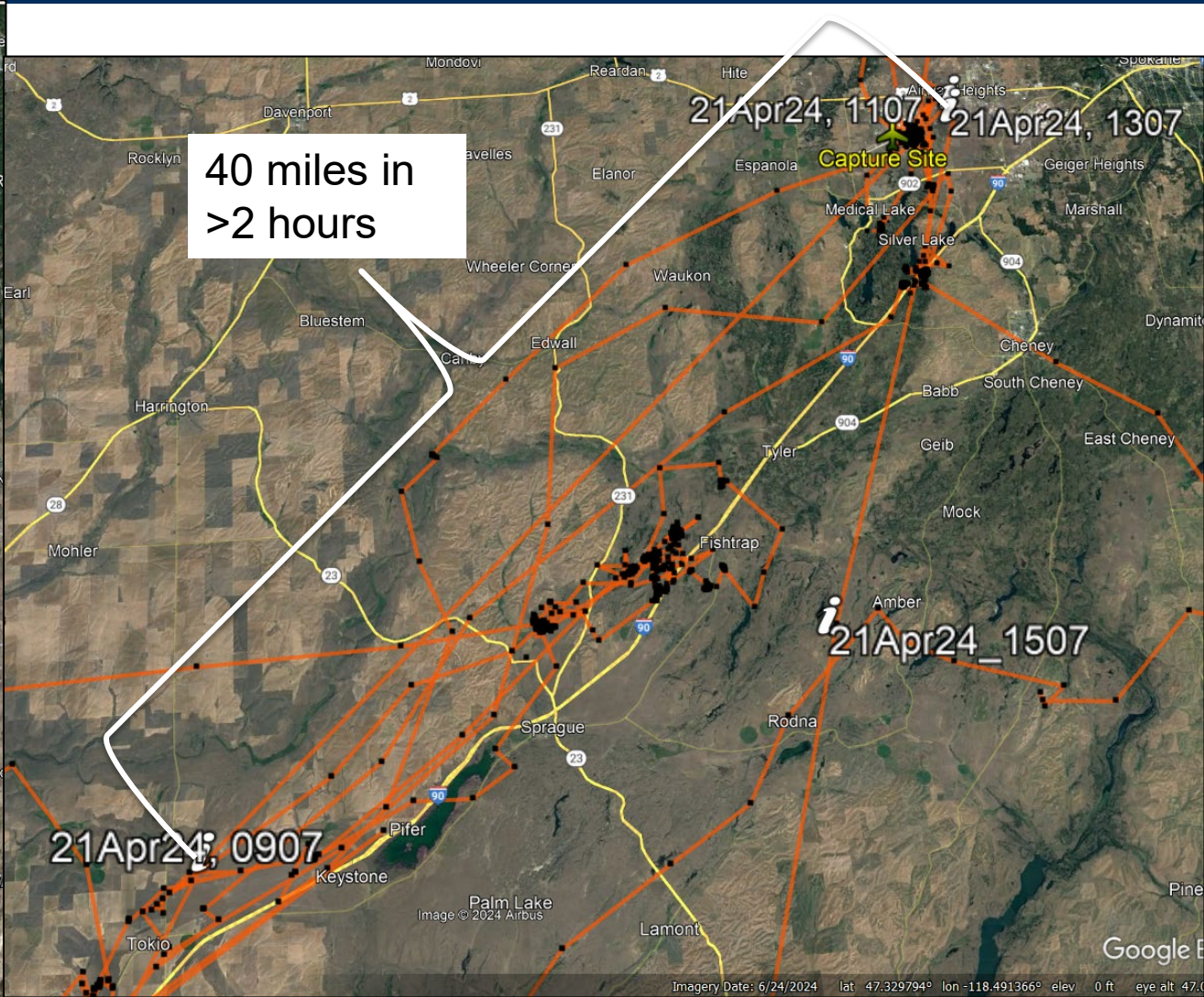
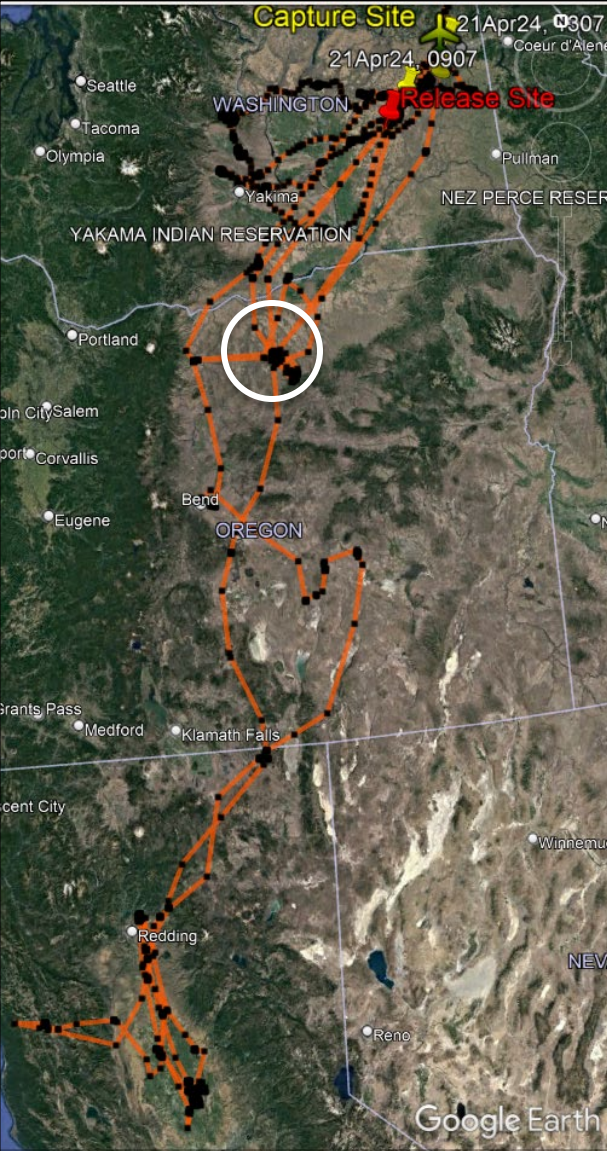






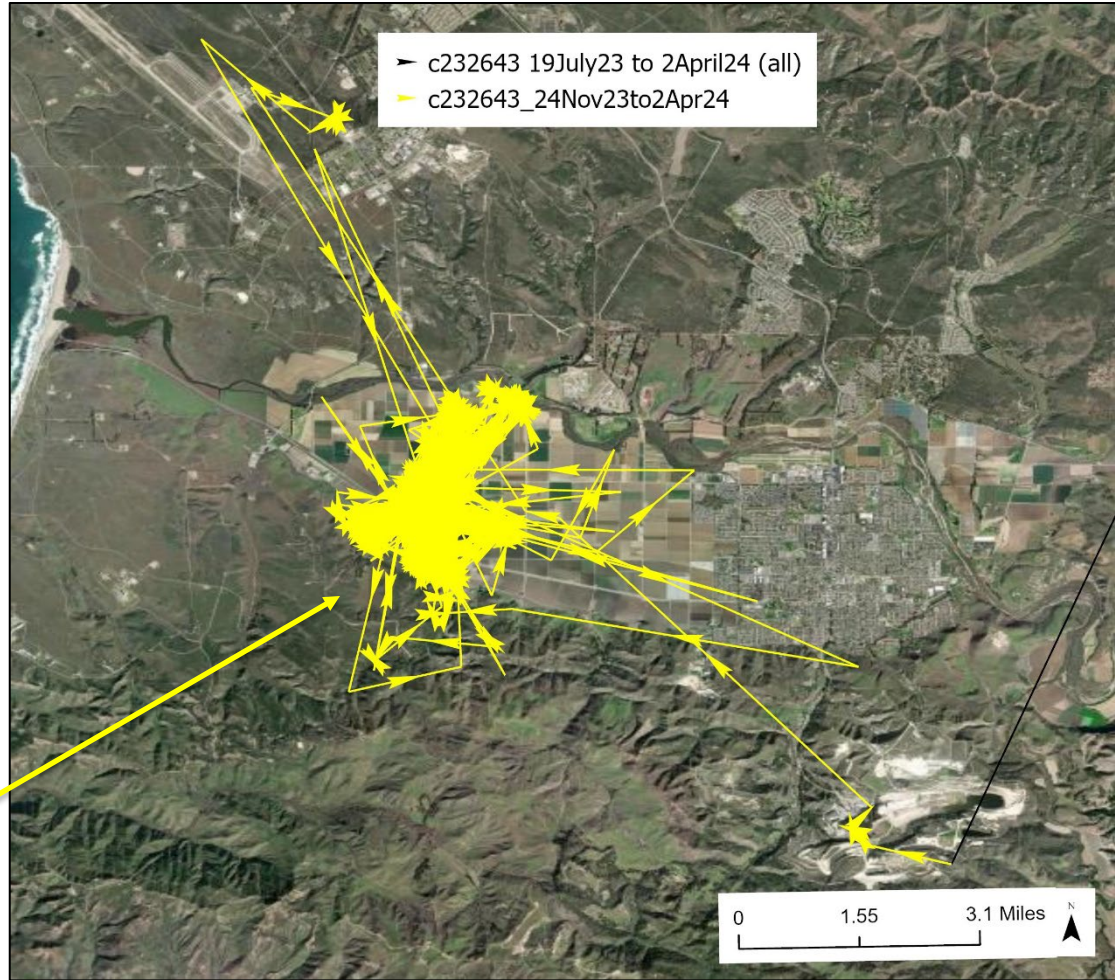
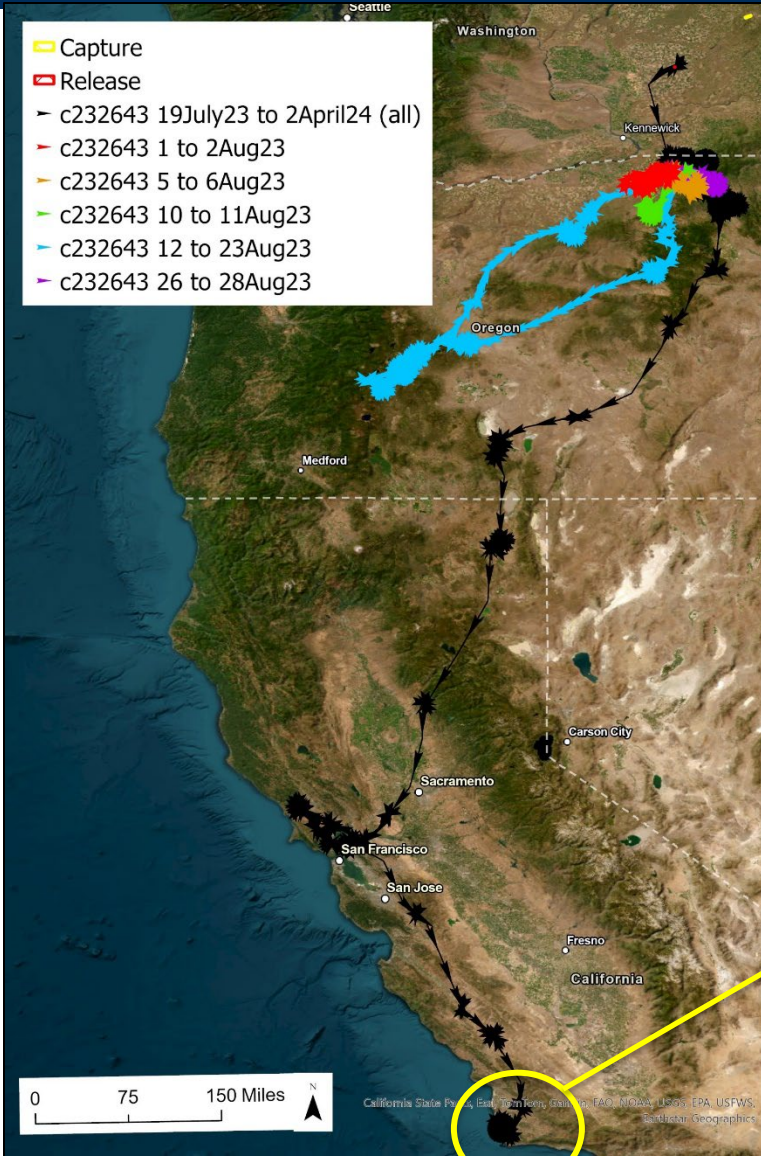
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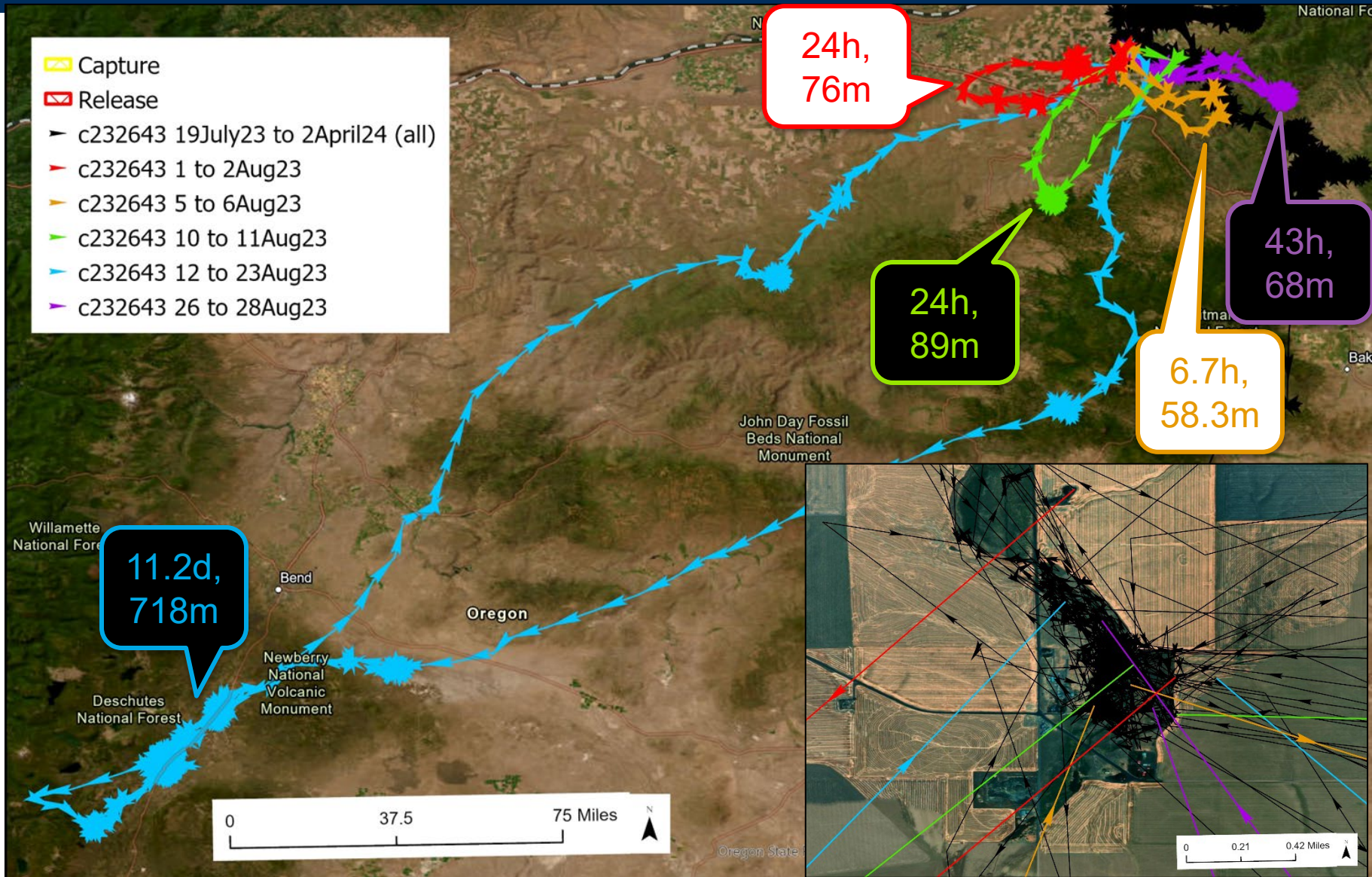
# 232642: 29Jul23 to 4Aug24



## Wildlife Services

Protecting People ♦ Protecting Agriculture ♦ Protecting Wildlife



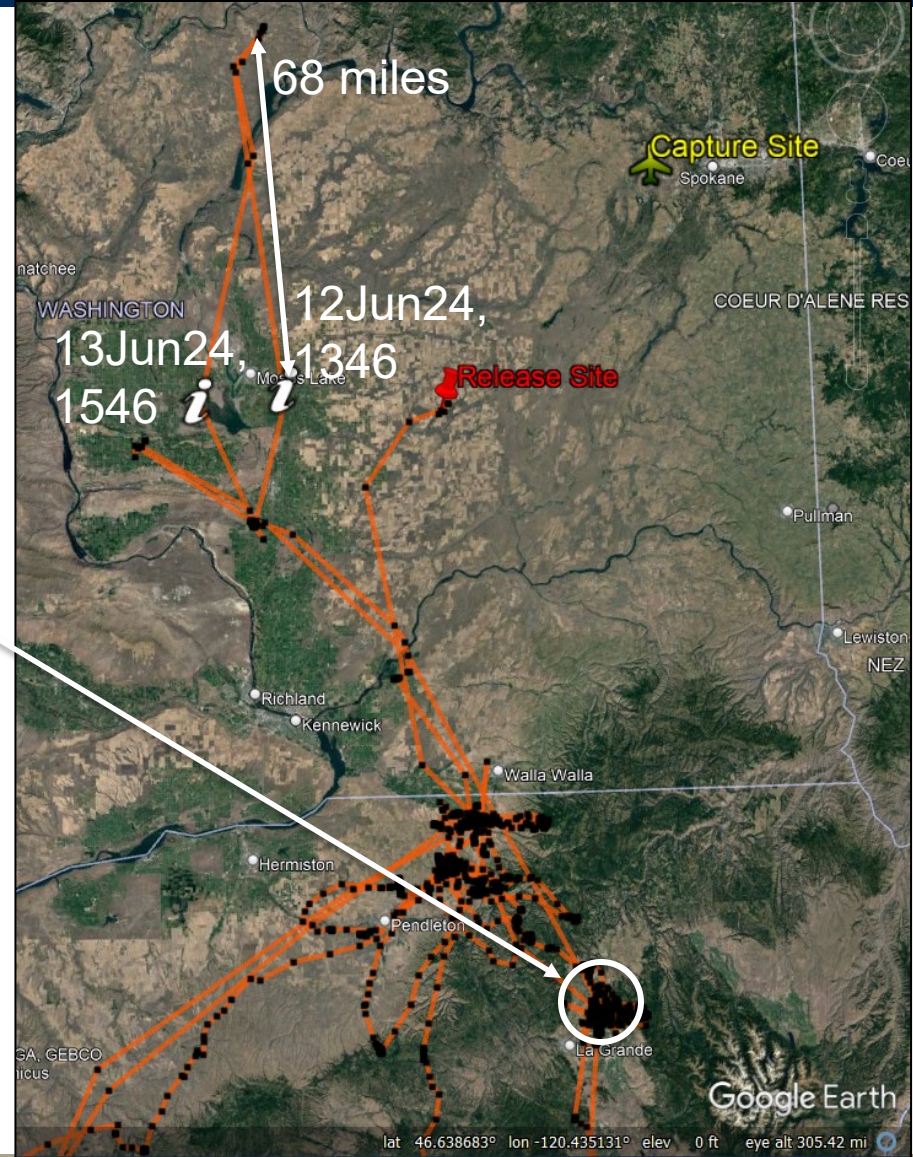
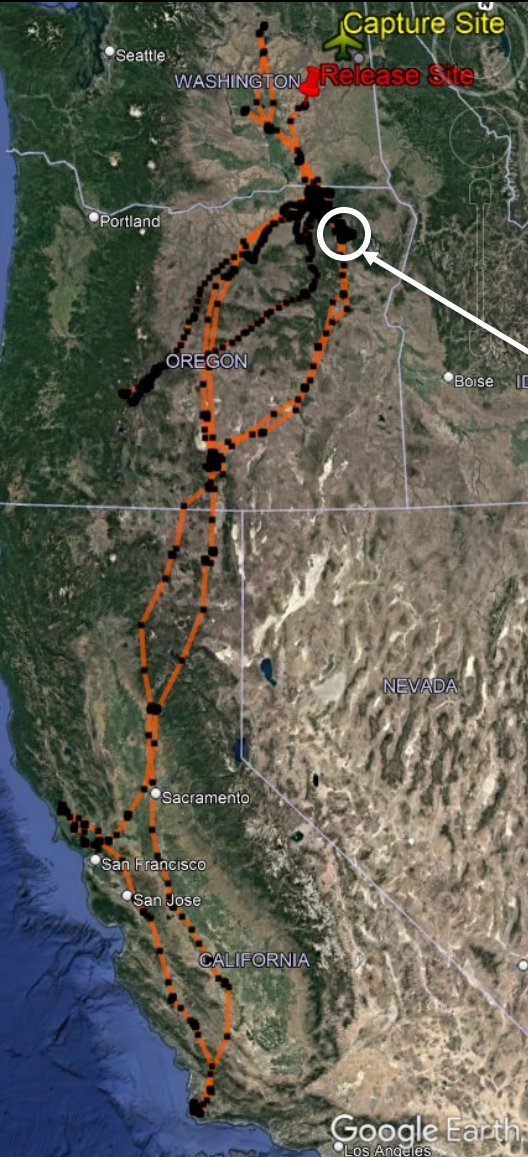






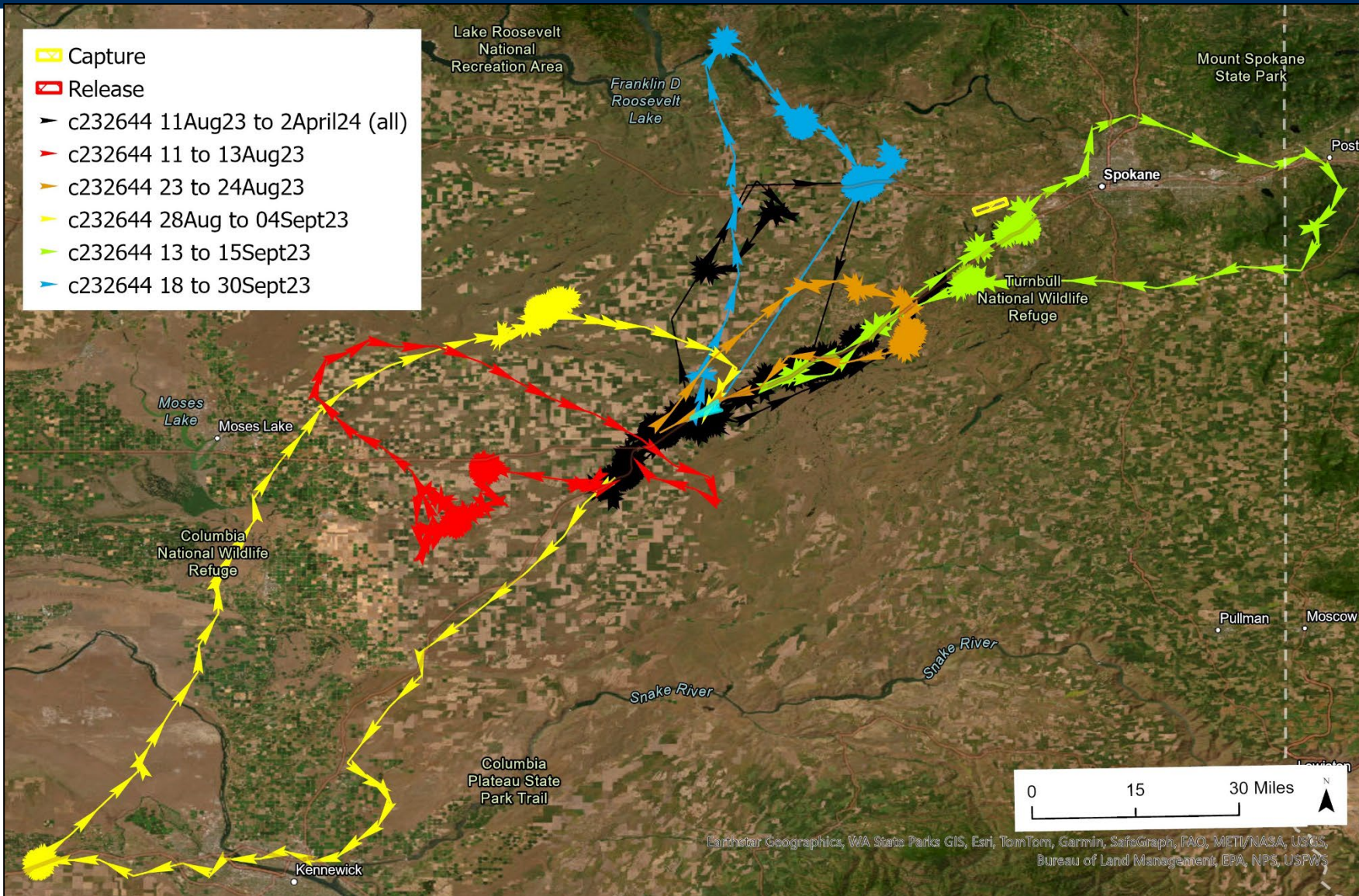
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# 232643: 19Jul23 to 30July24



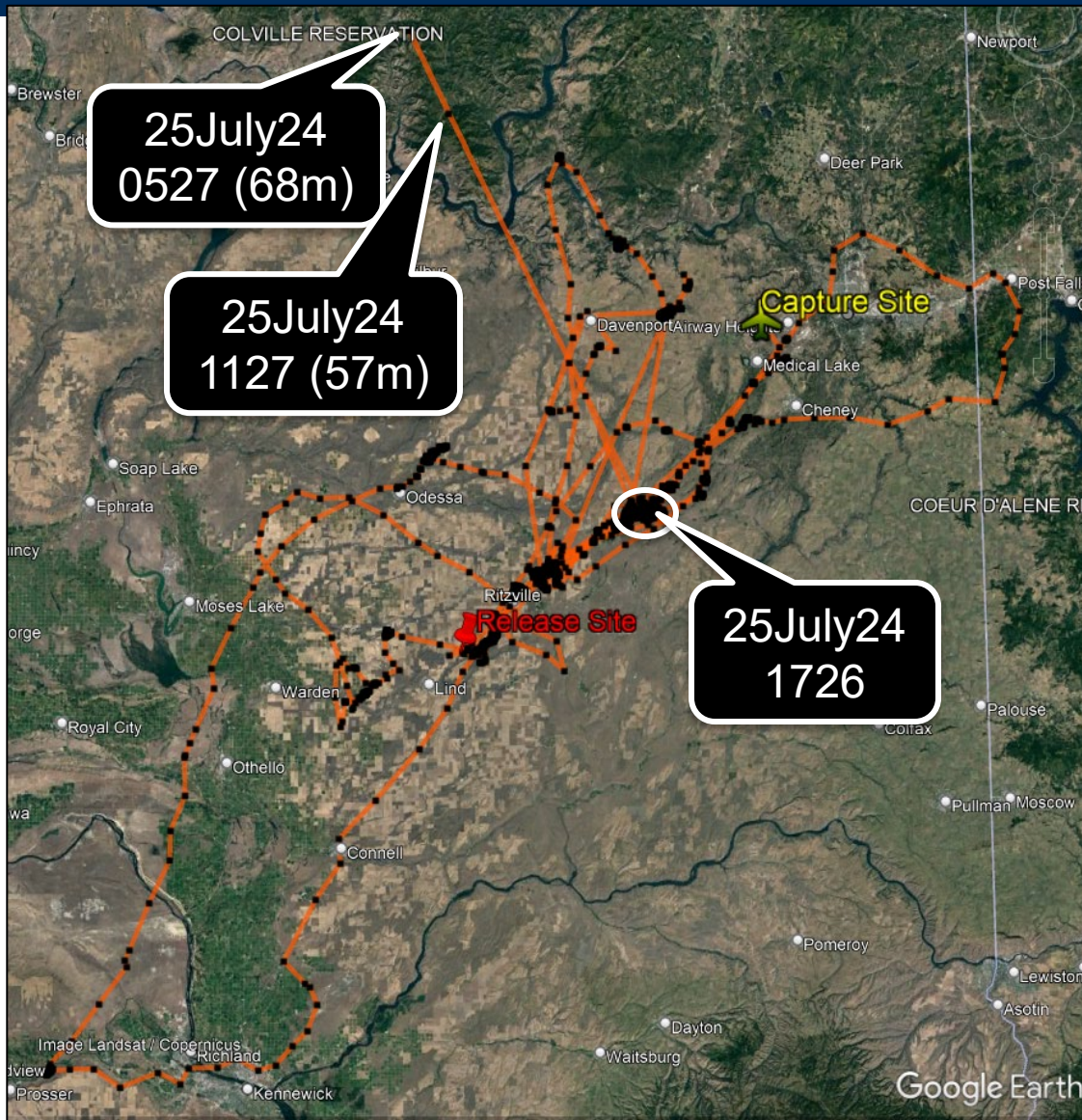
## Wildlife Services

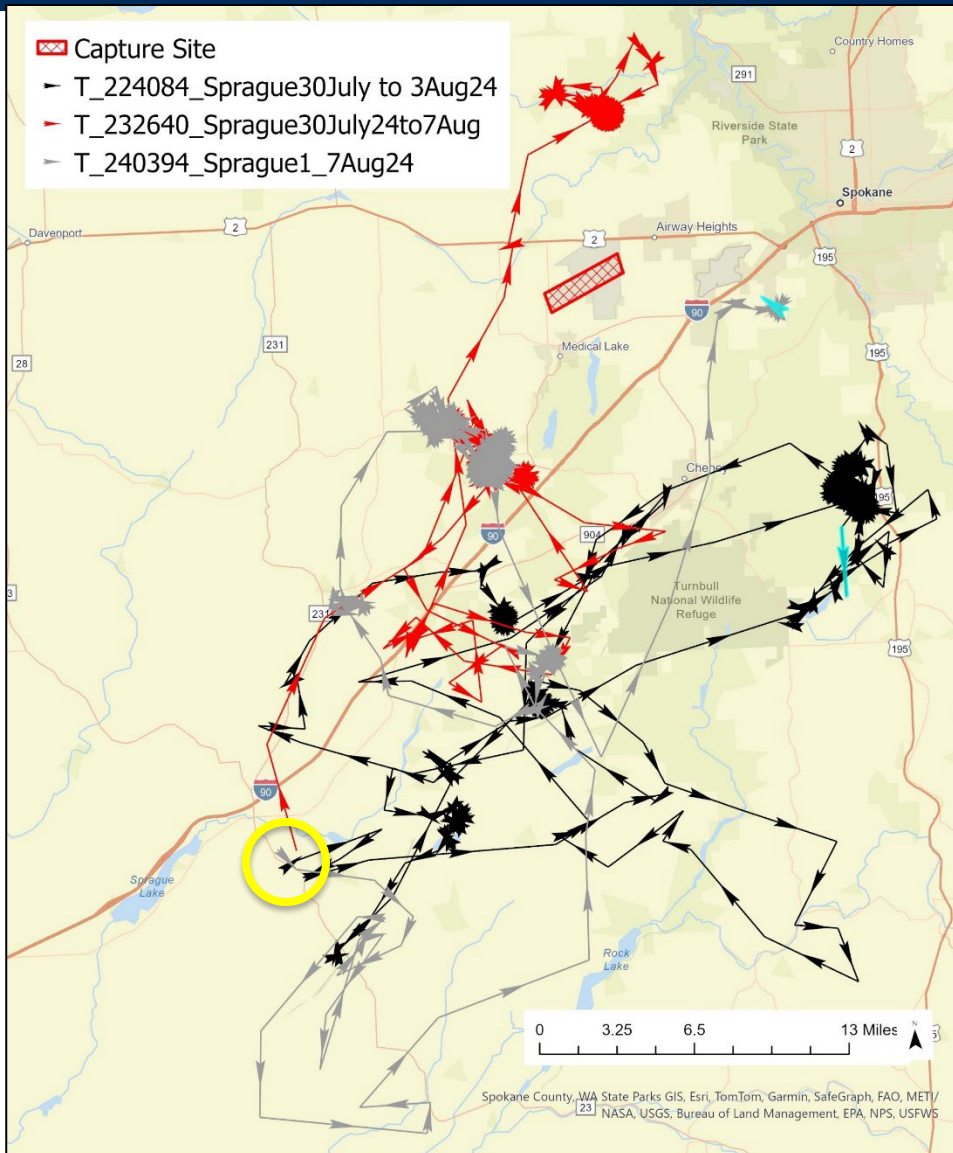
Protecting People ♦ Protecting Agriculture ♦ Protecting Wildlife

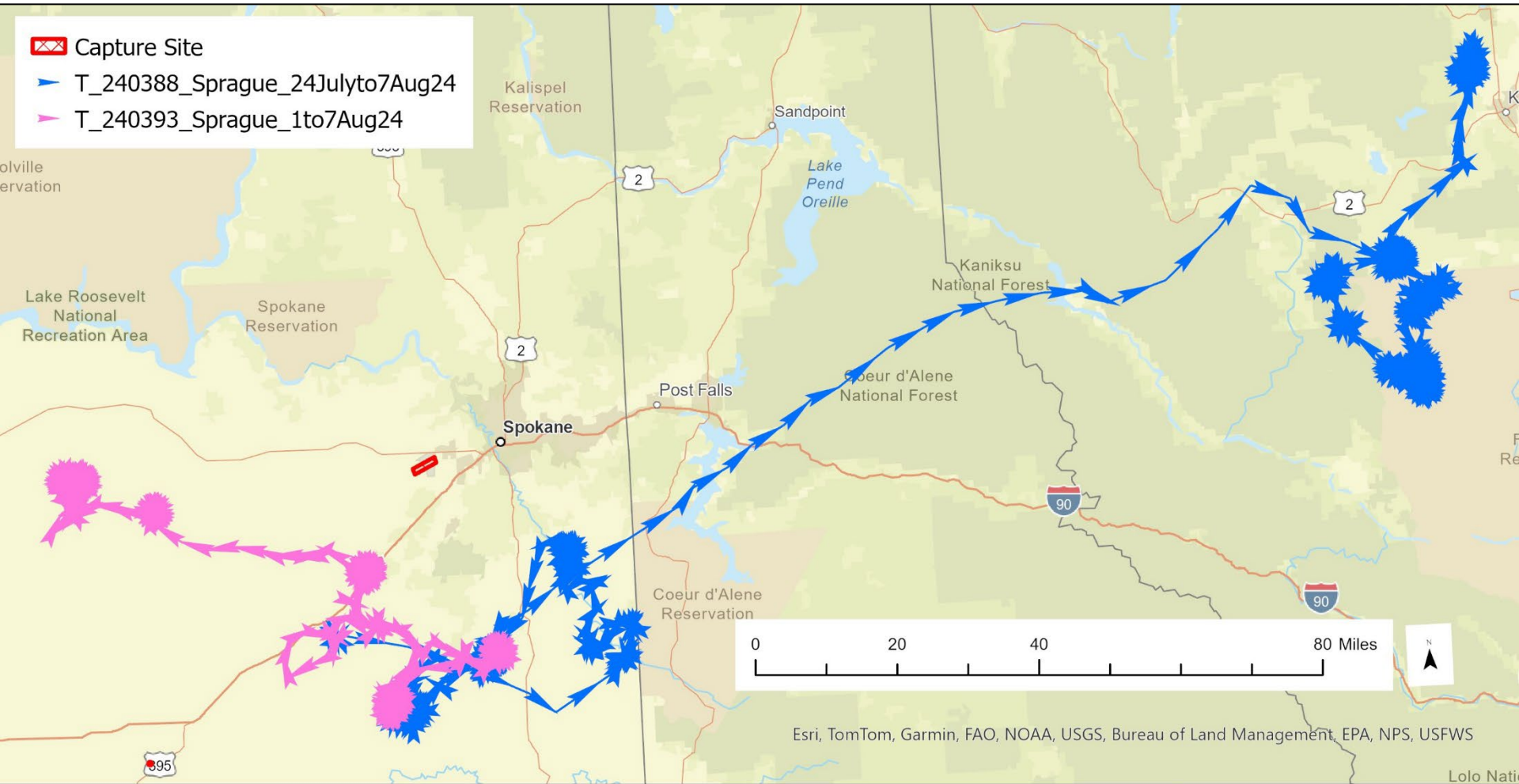


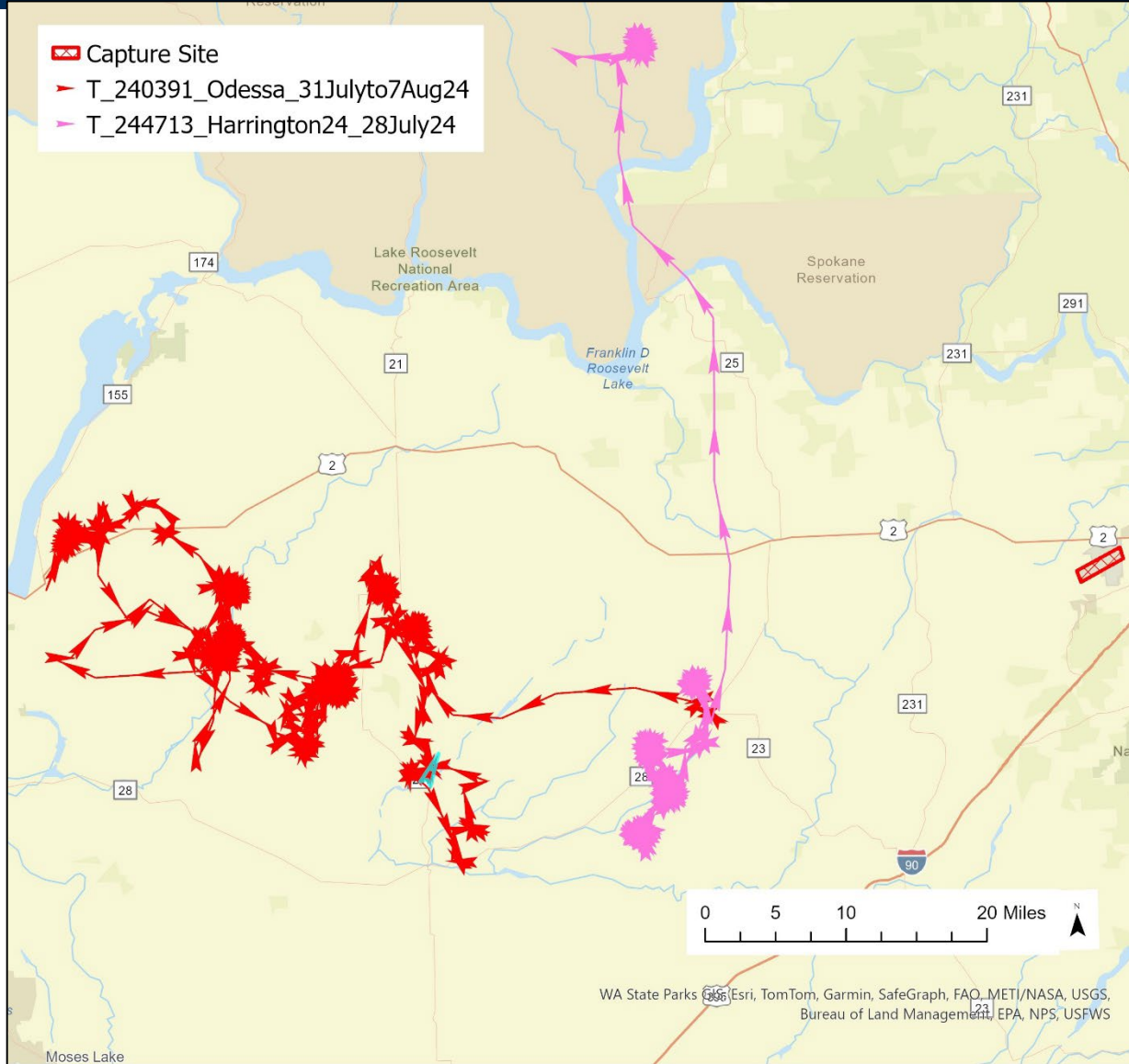


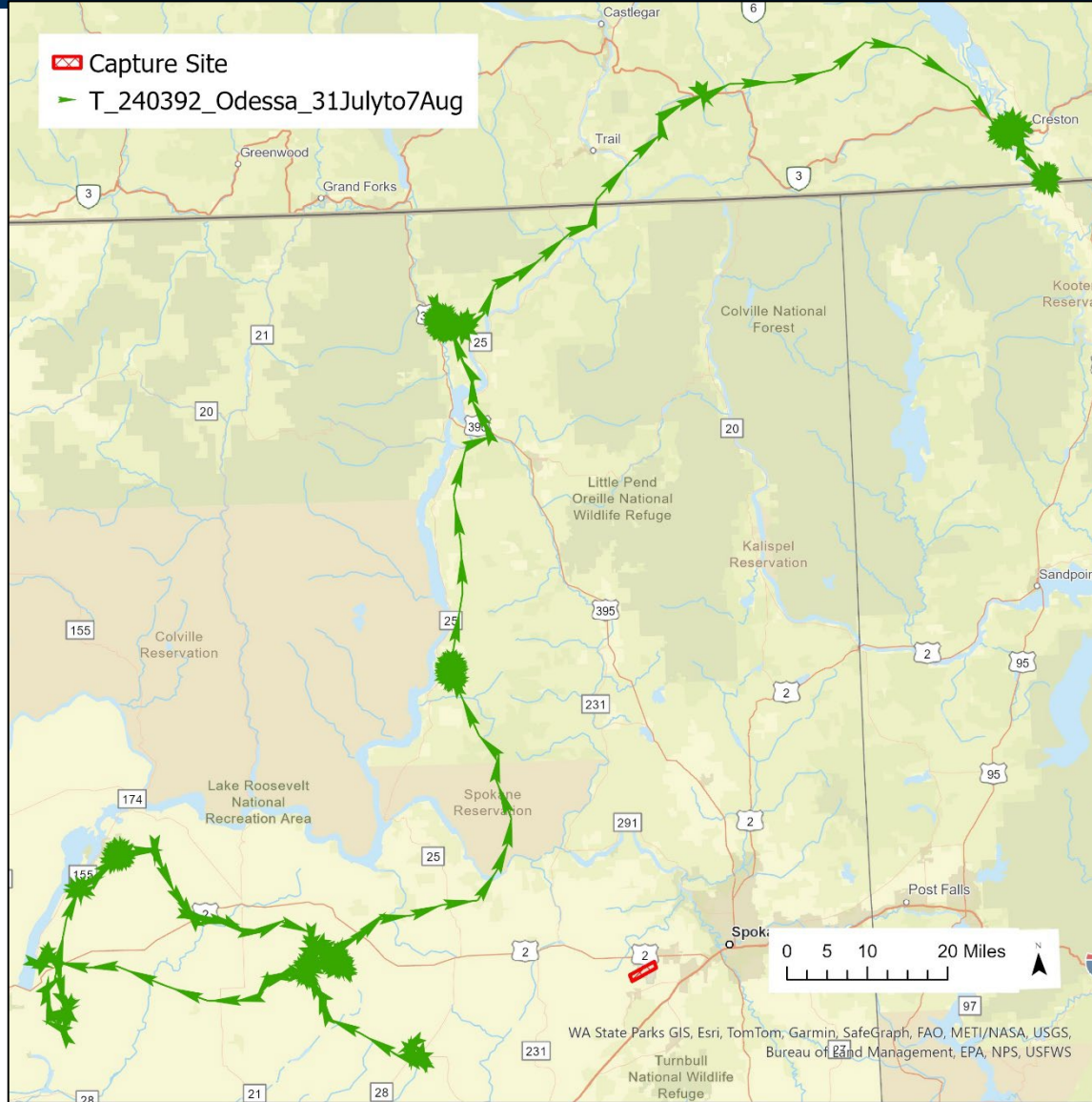
# 232644: 11Aug23 to 30July24

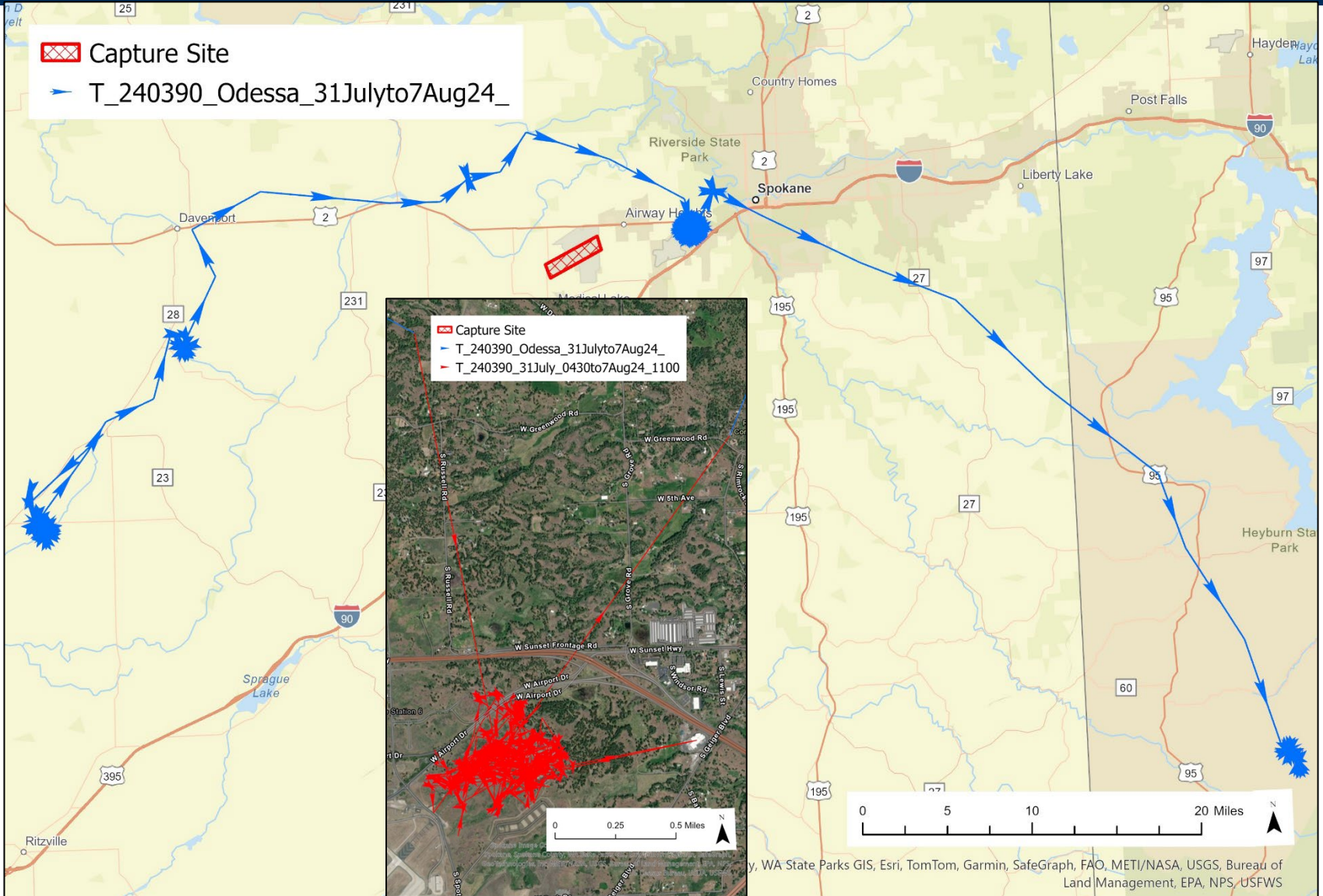




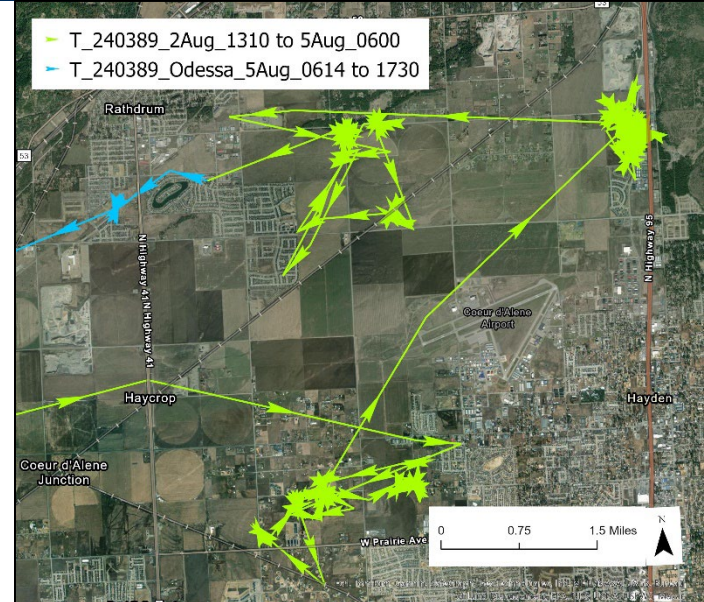
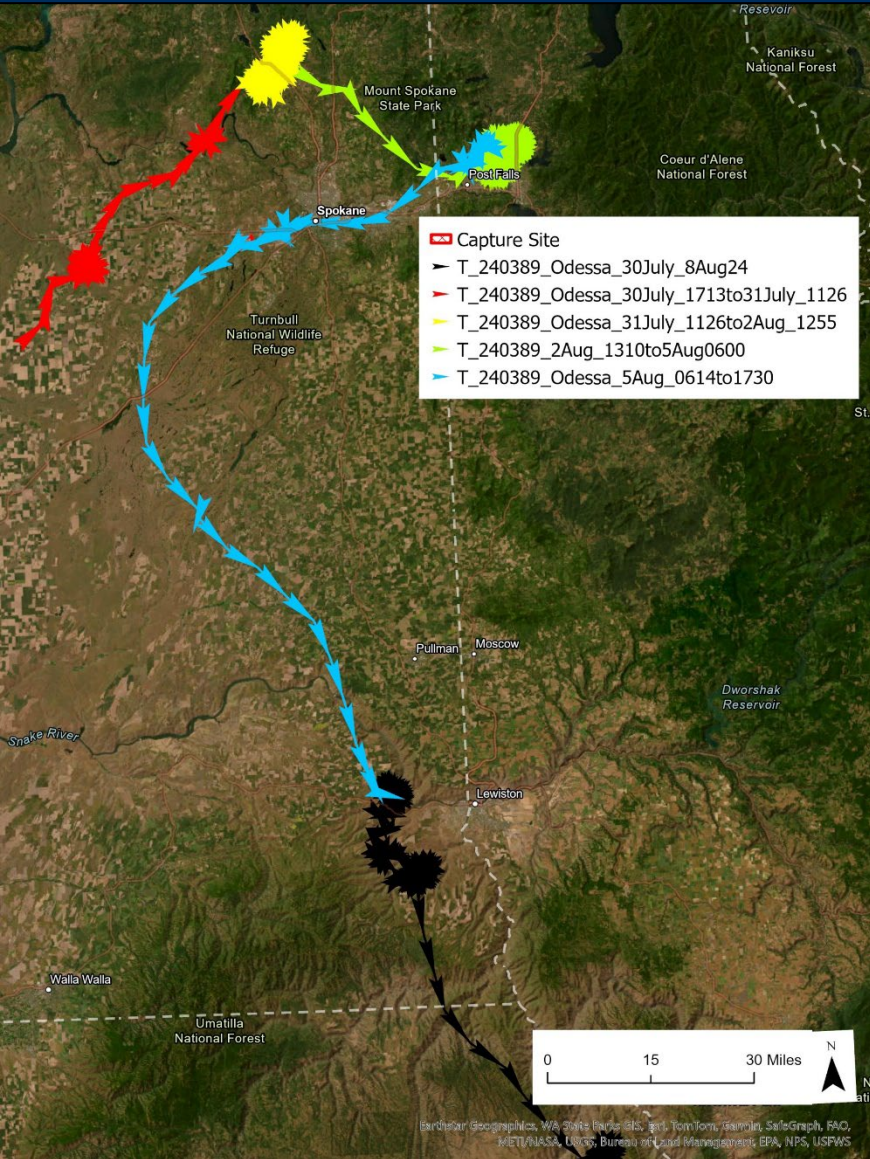






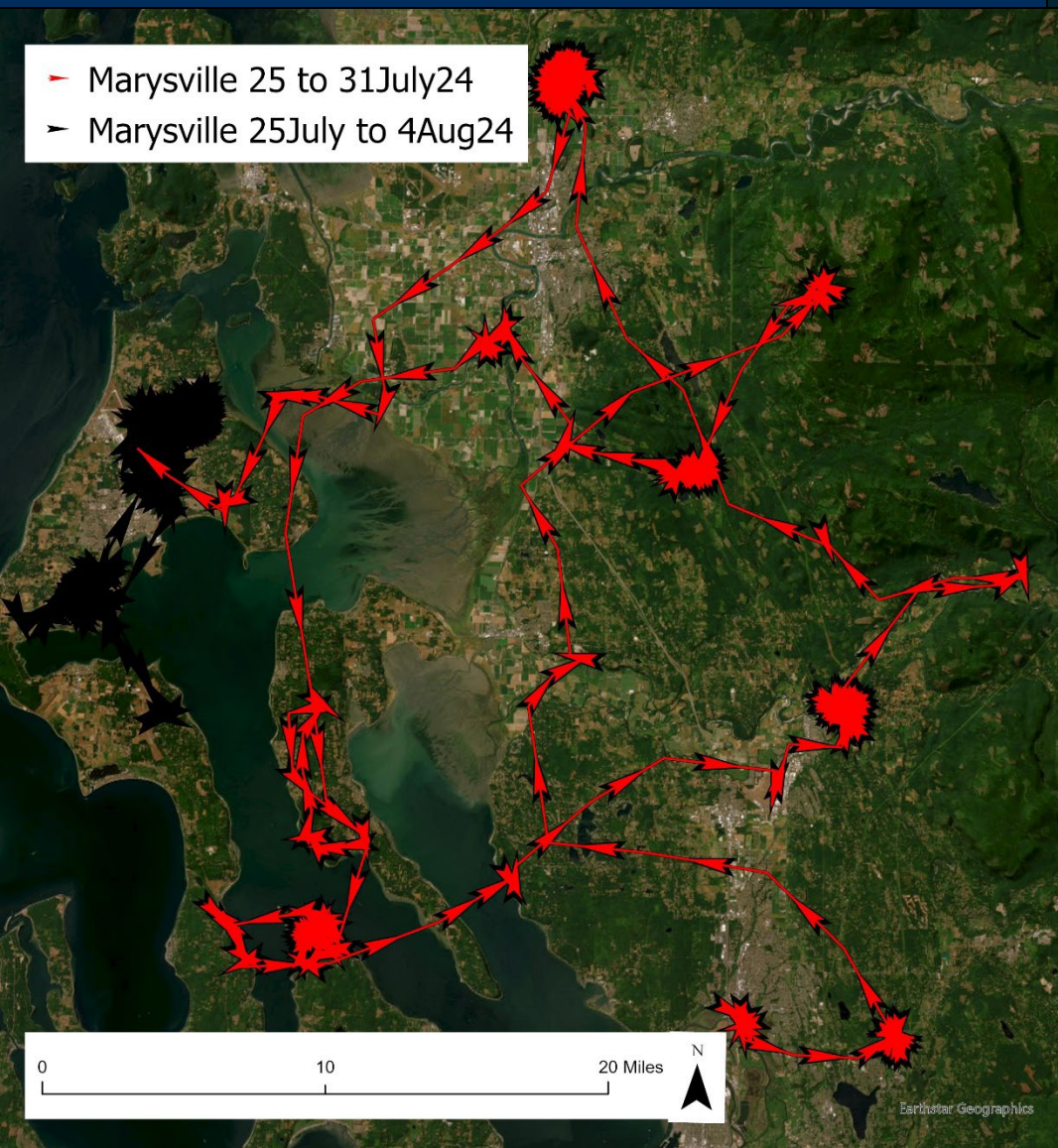




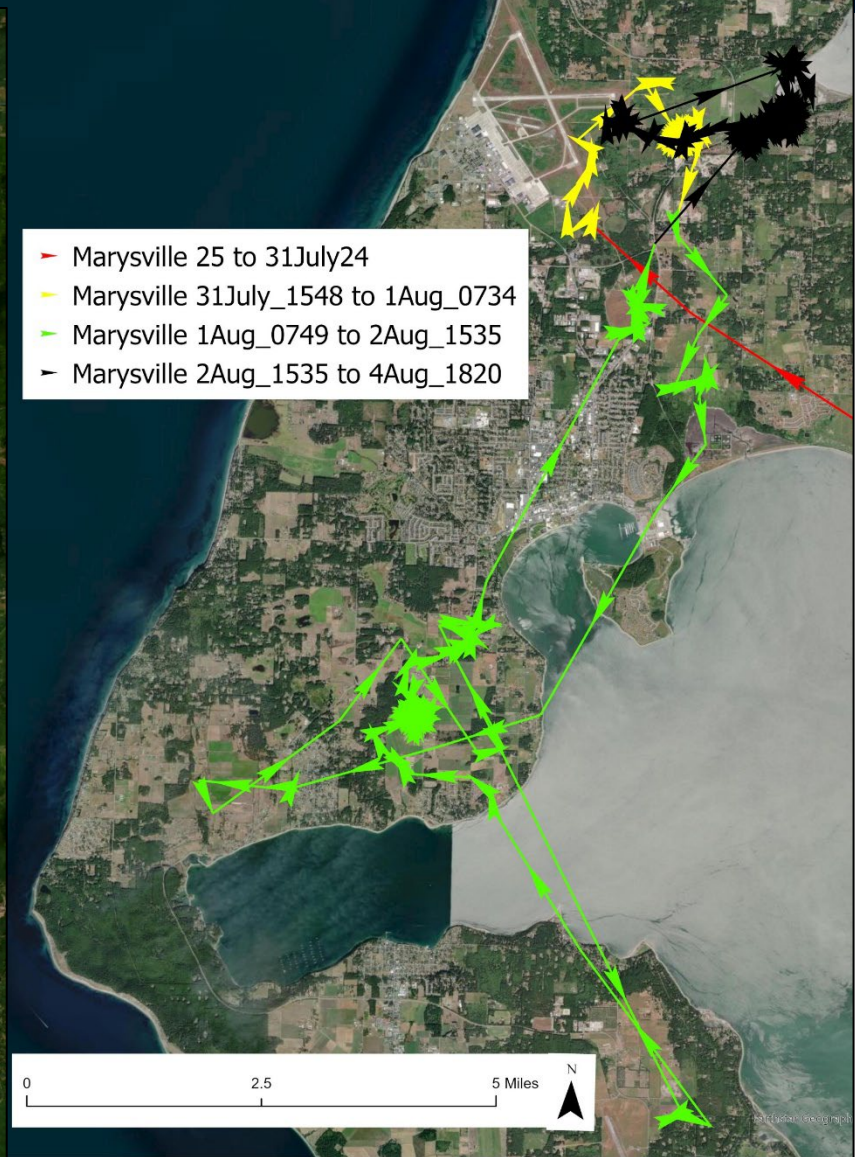




- ▶ Marysville 25 to 31 July 24
- ▶ Marysville 25 July to 4 Aug 24

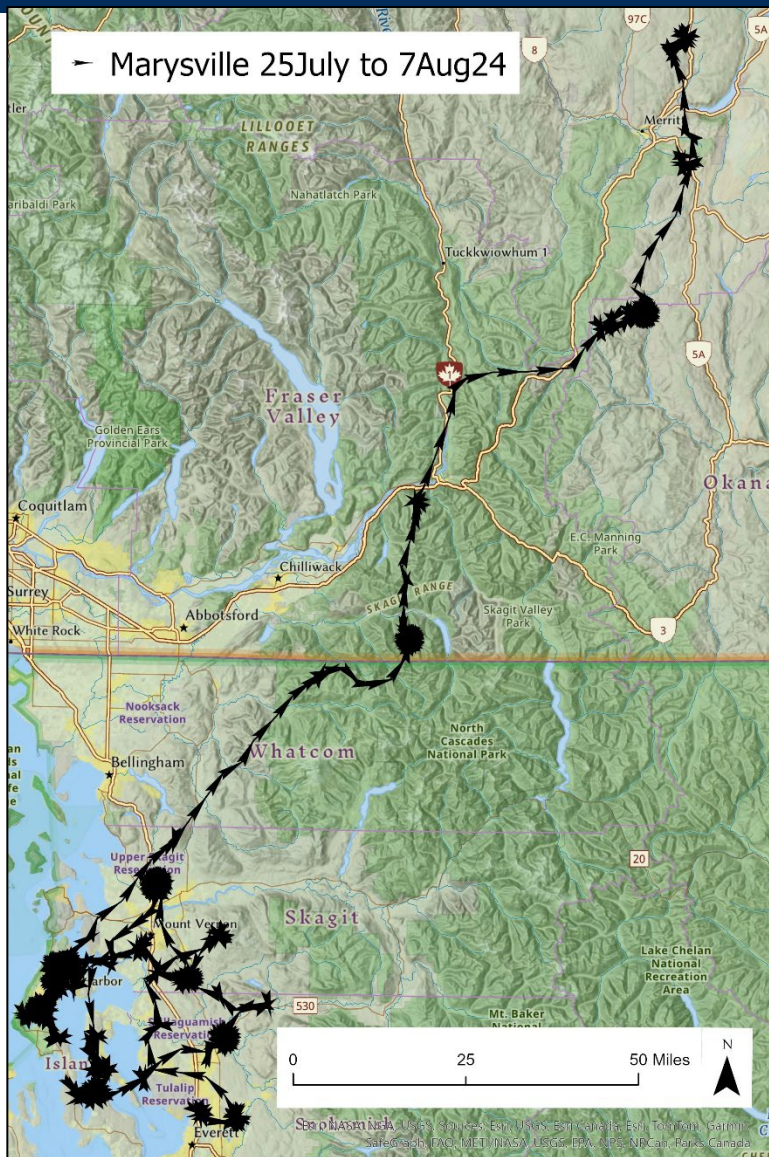


- ▶ Marysville 25 to 31 July 24
- ▶ Marysville 31 July\_1548 to 1 Aug\_0734
- ▶ Marysville 1 Aug\_0749 to 2 Aug\_1535
- ▶ Marysville 2 Aug\_1535 to 4 Aug\_1820





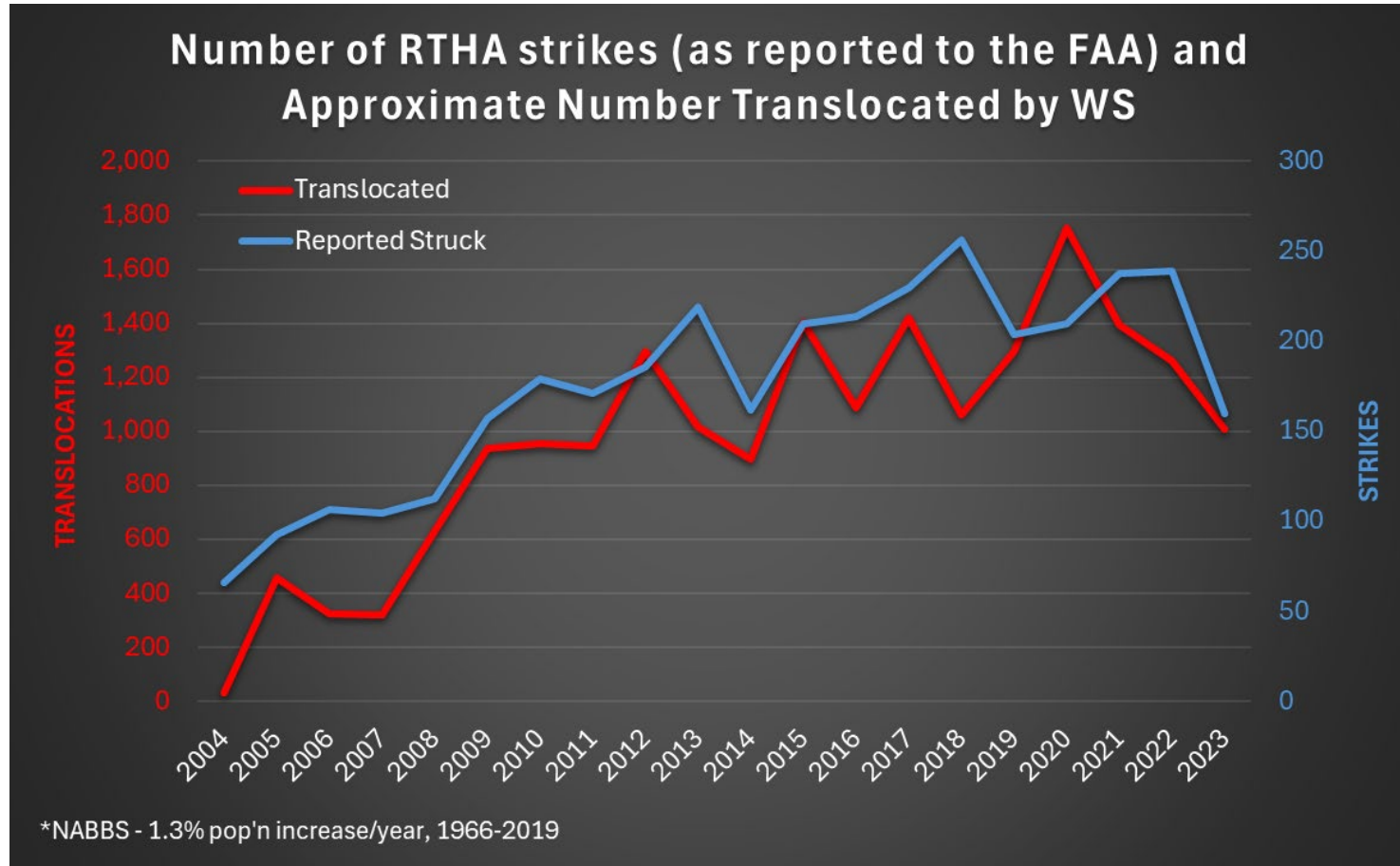
# 158 Miles of Crazyiness



Dolbeer et al. 2024...

Waterfowl, raptors, and gulls are the species groups of birds with the most damaging strikes.

Columbids (13%), raptors (12%), shorebirds (9%), gulls (9%), and waterfowl (4%) were the most frequently struck bird groups.



- USDA WS has been translocating raptors since 1999
- Raptors are the 2<sup>nd</sup> most frequently struck and damaging guild
- Raptors are charismatic mesofauna
- They appear to survive translocation
- Trapping is labor/time intensive
- Banding and translocating is labor/time intensive

- ~~USDA WS has been translocating raptors since 1999~~
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- It is reactive
  - The strike risk exists for some amount of time before capturing the bird



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- ~~Raptors are charismatic mesofauna~~
- ~~Trapping is labor/time intensive~~
- ~~Banding and translocating is labor/time intensive~~
- ~~It is reactive~~
  - ~~The strike risk exists for some amount of time before capturing the bird~~
  
- Airports need a greater focus on proactive/preventative methods to deterring raptors from using the airfield.
  - remove the food





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# QUESTIONS?

## Be Creative, but be Cautious

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USDA-Wildlife Services, WA



Spokane International Airport



King County  
International Airport  
Boeing Field



92d ARW

