

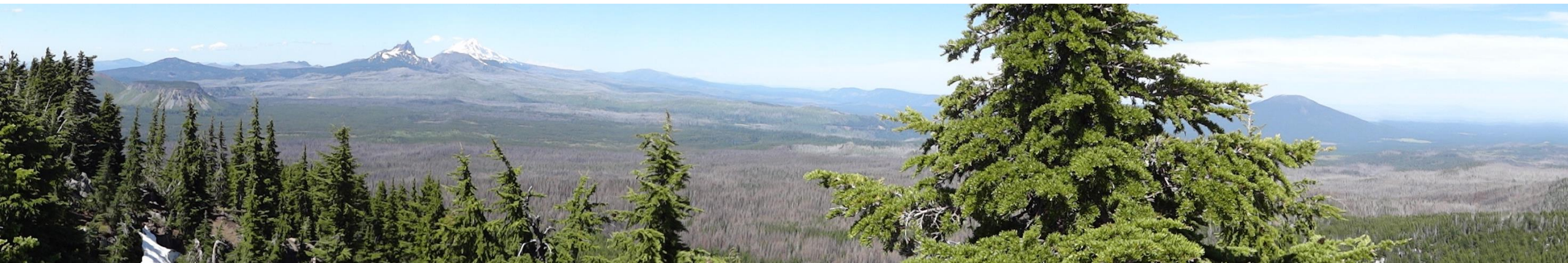
A Westside Story: 2017 Fire Season in Review

Christopher J. Dunn, Ph.D.
Garrett W. Meigs, Ph.D.



Overview of 2017 fire season in Oregon:

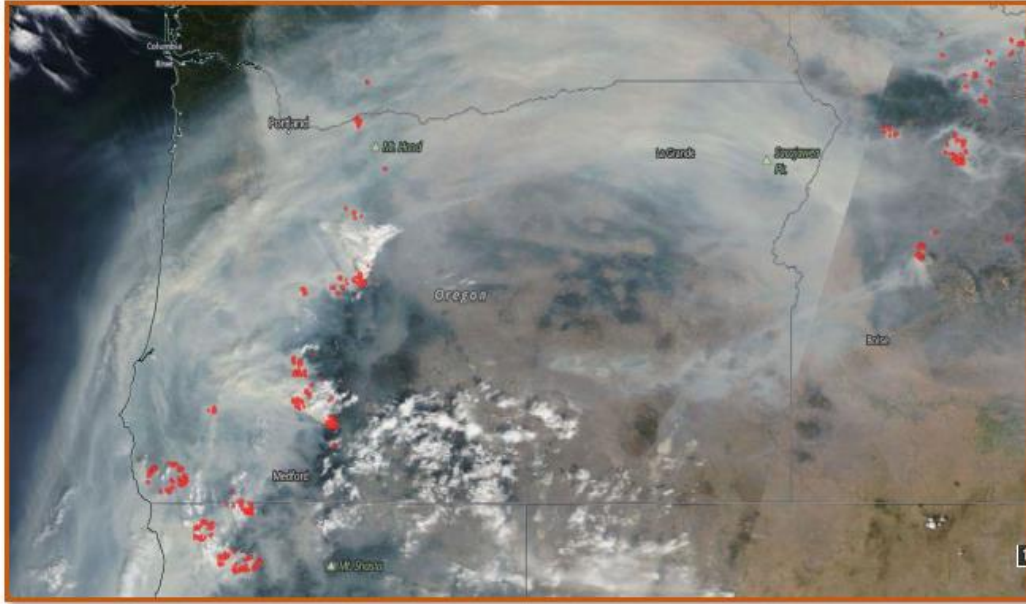
- Climate context: wet winter, hot summer.
- Geographic context: fire location, timing, severity.
- A tale of two fires: Eagle Creek and Chetco Bar.
- Social, economic, ecological, and management implications.
- Looking ahead to 2018 fire season...



Impacts of Oregon's 2017 Wildfire Season

TIME FOR A CRUCIAL CONVERSATION

January 2, 2018



Google satellite photo over Oregon showing wildfire locations, Sept. 4, 2017.



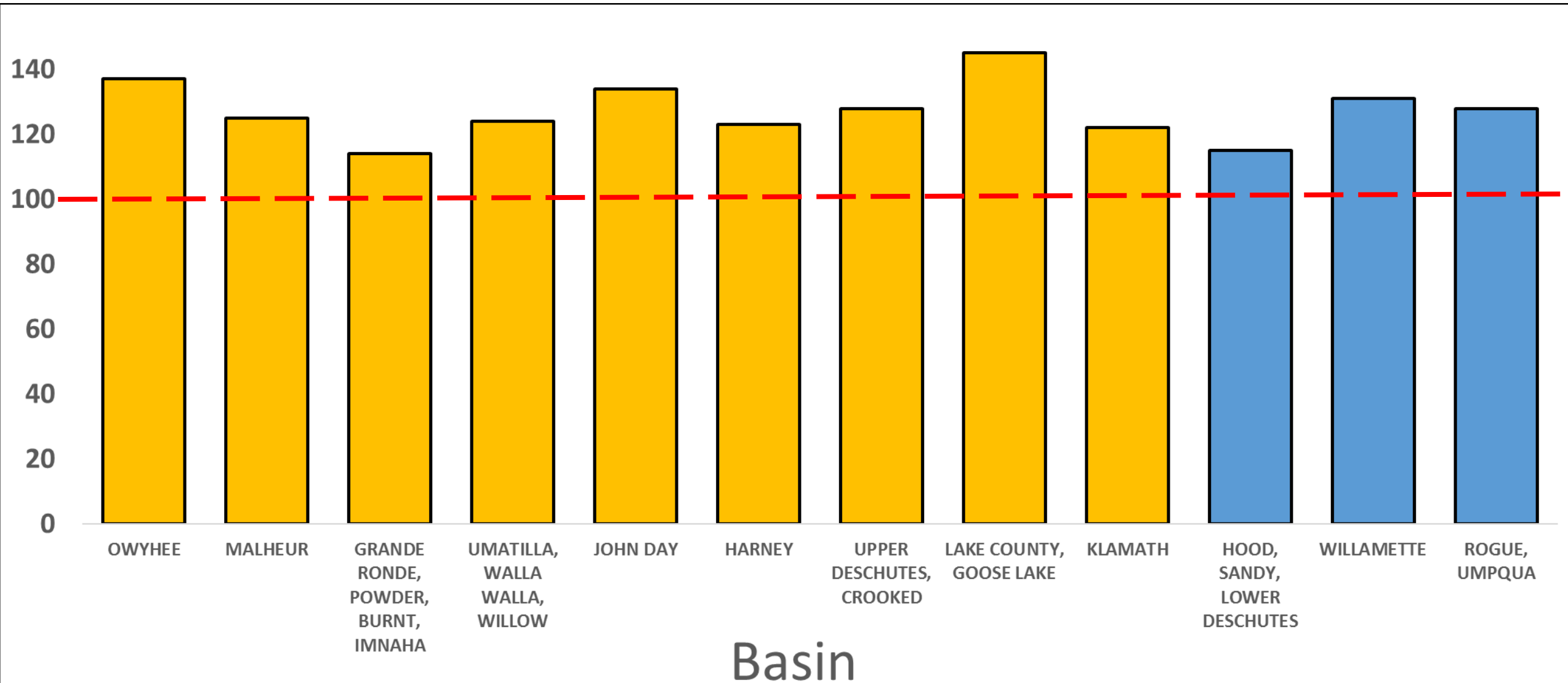
317 SW Sixth Ave., Suite 400 Portland, OR 97204-1705
971-673-2944 | OregonForests.org

Key topics:

- Air quality and health
- Sporting events
- Travel and tourism
- Employment and the economy
- Transportation
- Local impact
- Long-term effects

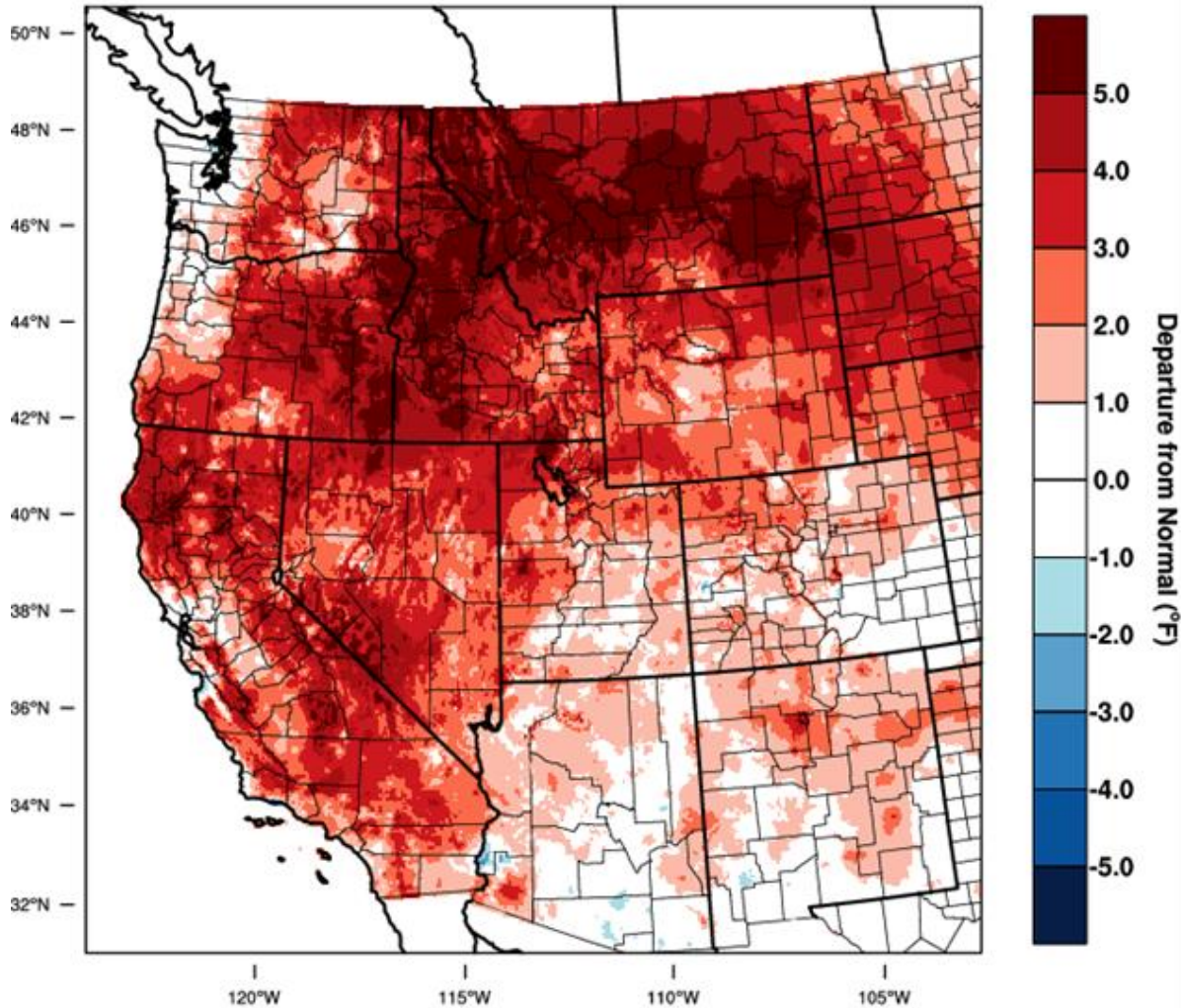
<https://oregonforests.org/pub/impacts-oregons-2017-wildfire-season-summary>

Feb. 27th, 2017: Basin-wide snowpack (% of 1981-2010 median)



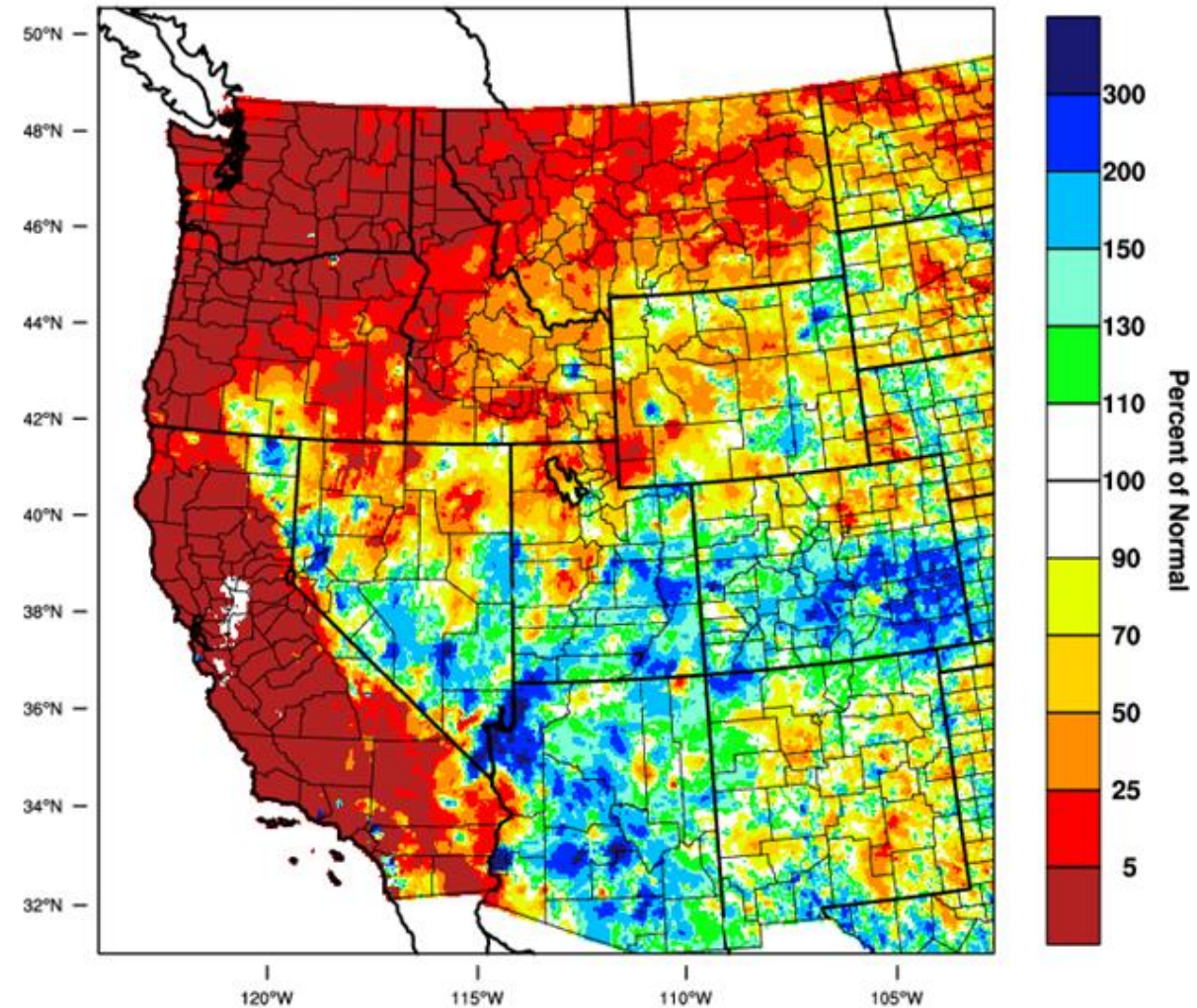
July 2017 climate

Temp. departure from normal



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 2 AUG 2017

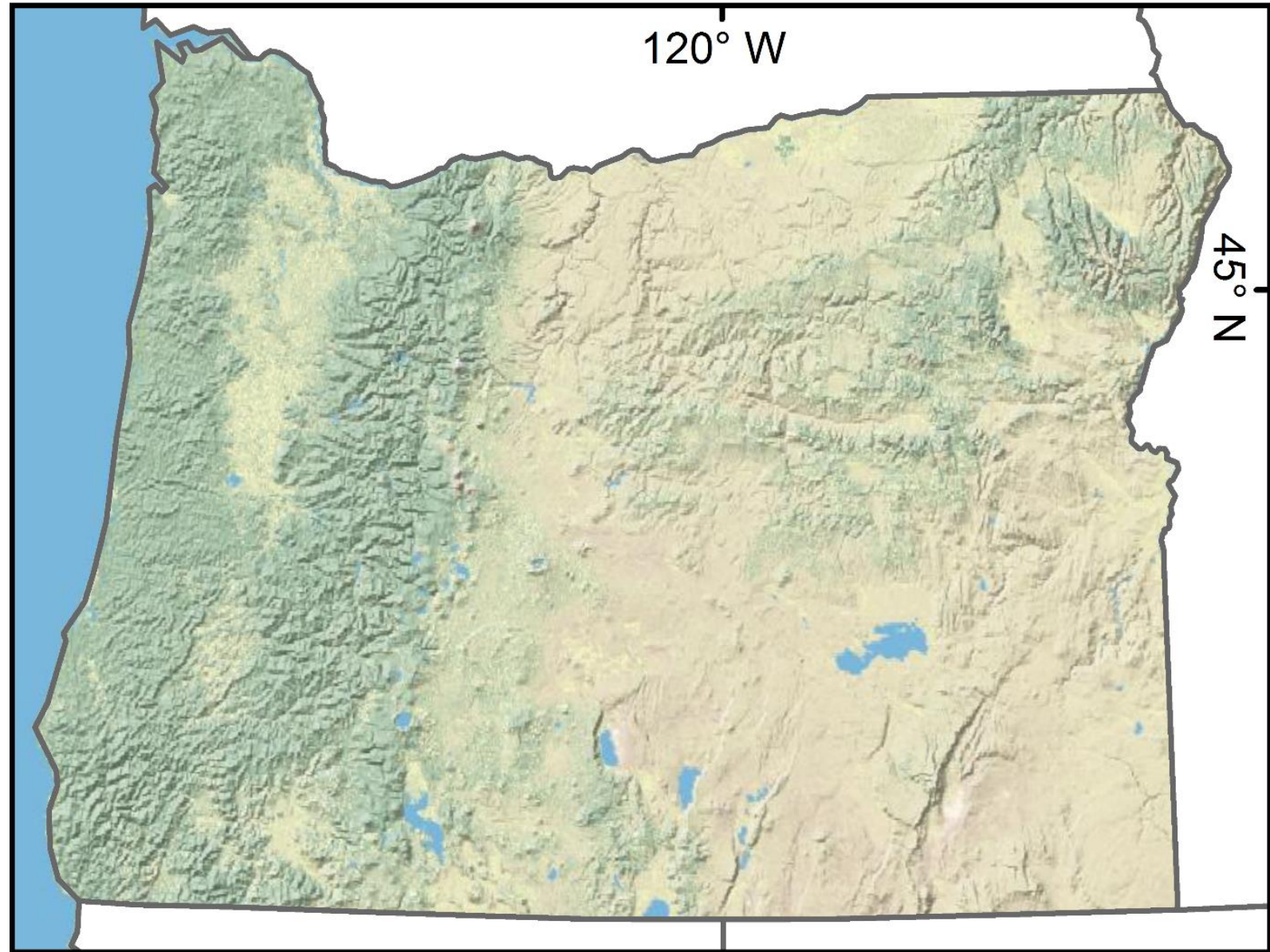
Precip. % of normal (1981-2010)



WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 2 AUG 2017

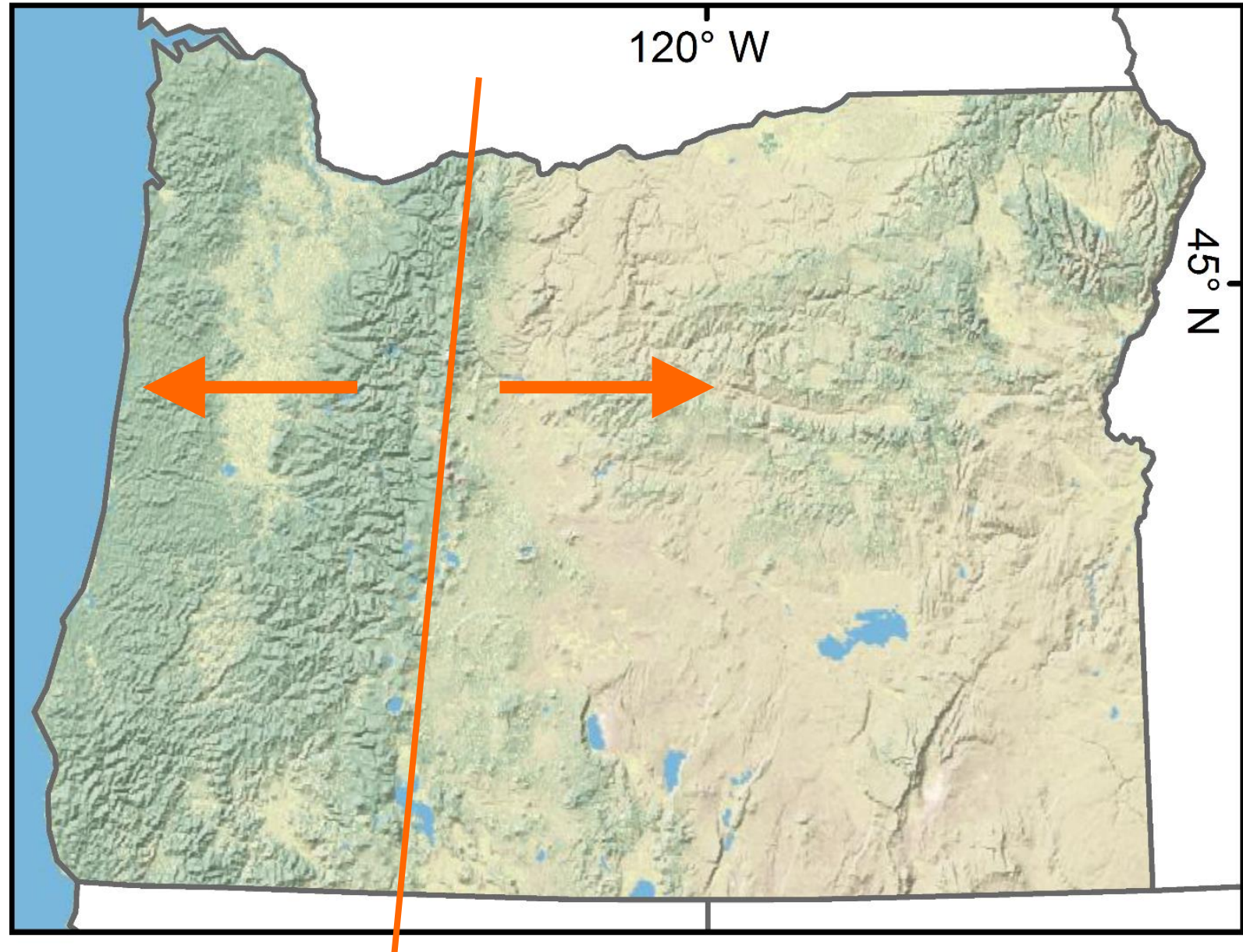
Oregon pyrogeography:

- Strong gradients
- Variable forest types and fire regimes
- Mixed ownerships and management objectives



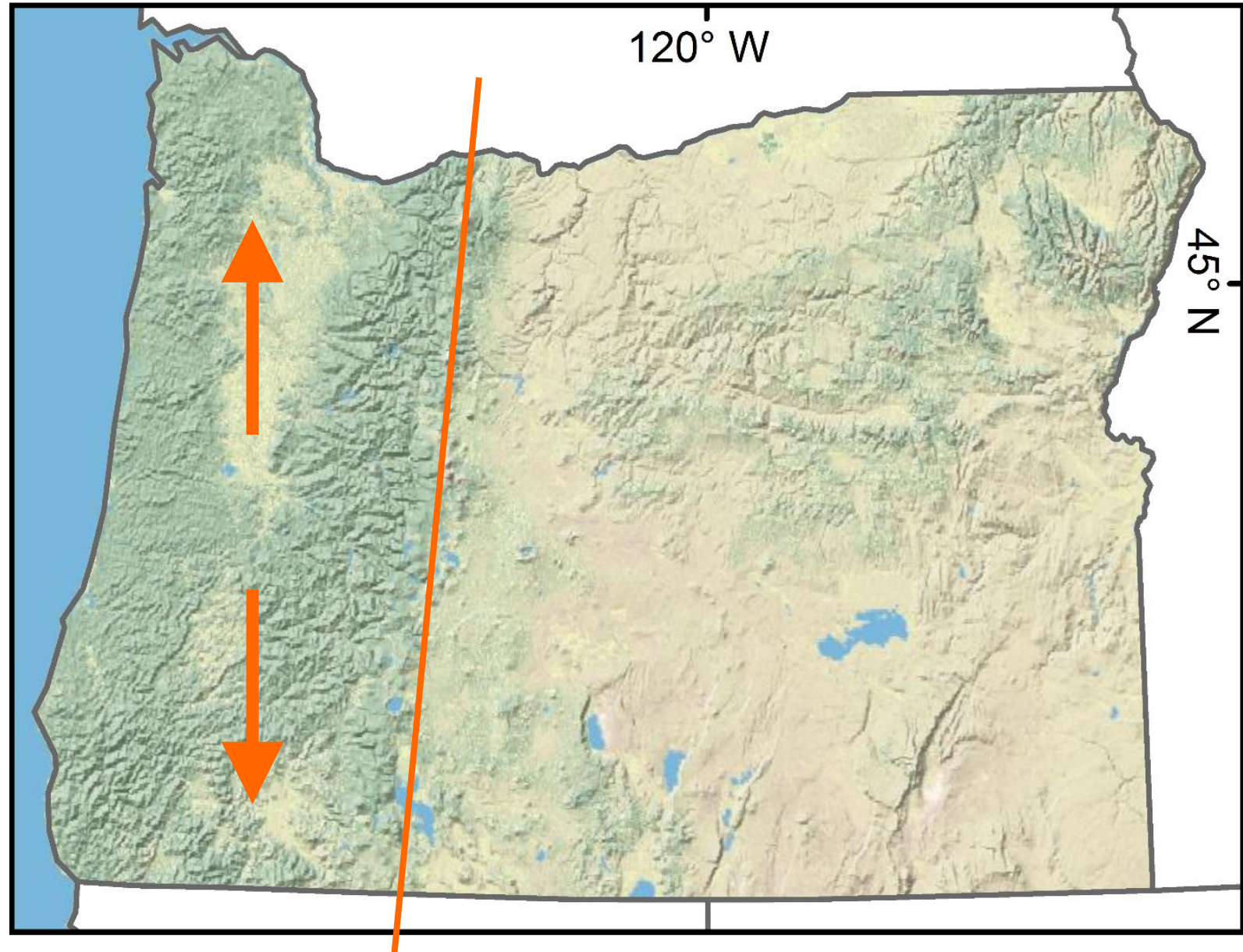
Oregon pyrogeography:

- Strong gradients
- Variable forest types and fire regimes
- Mixed ownerships and management objectives
- Westside to Eastside




Oregon pyrogeography:

- Strong gradients
- Variable forest types and fire regimes
- Mixed ownerships, and management objectives
- Westside to Eastside
- North to South

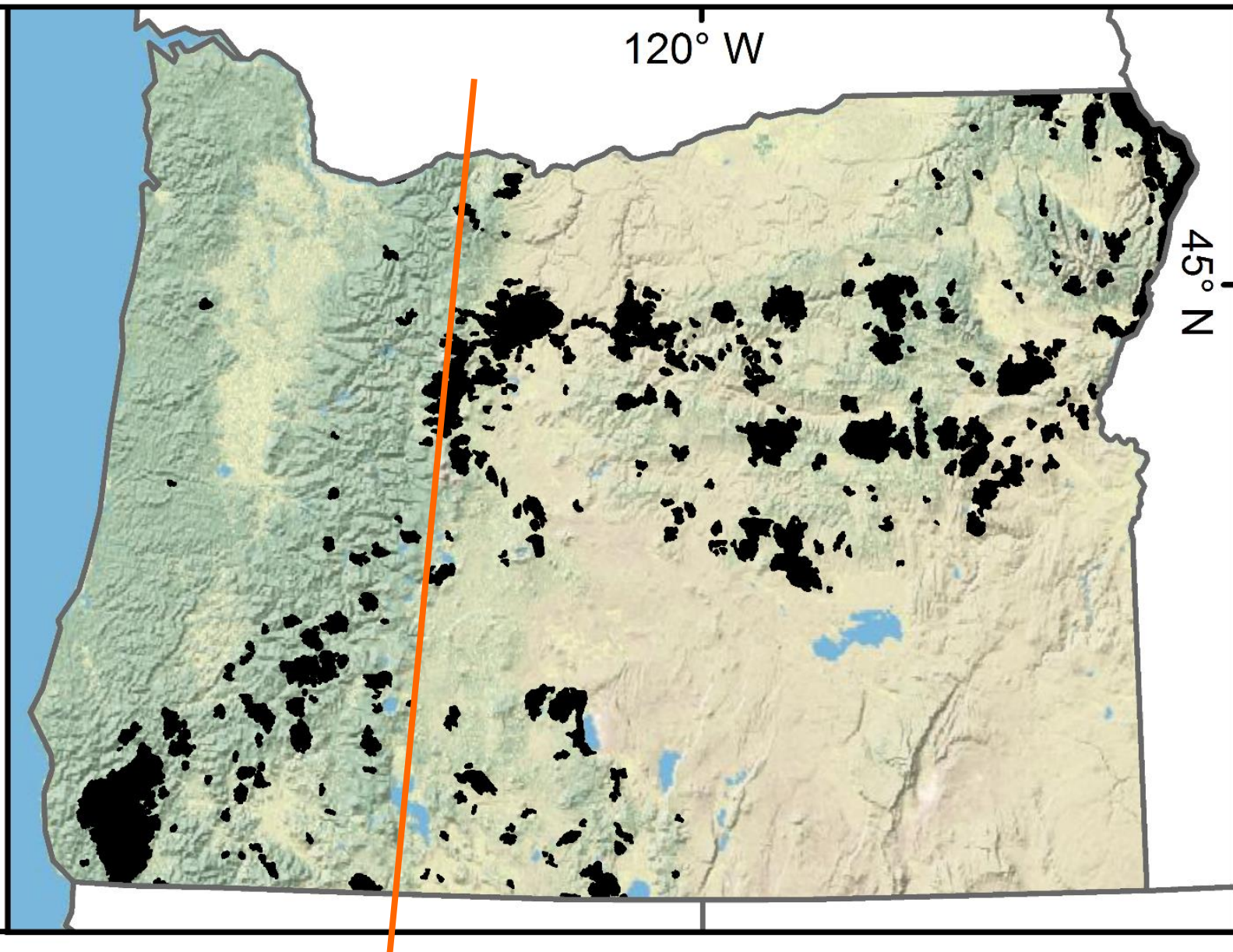


Legend



-  Large fires (1984-2015)
in forested ecoregions



0 100 km

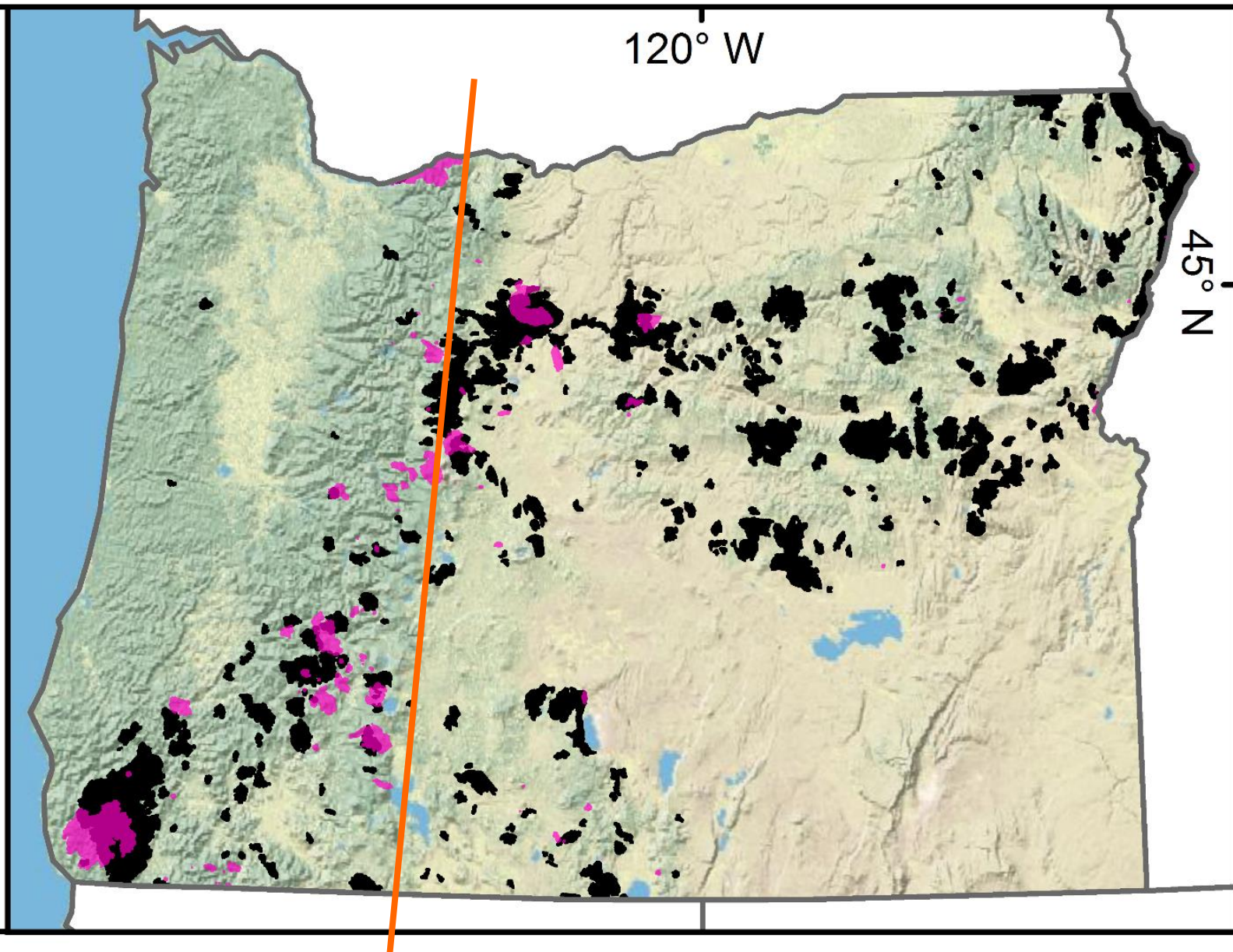


Legend



-  Large fires (2017)
in forested ecoregions
-  Large fires (1984-2015)
in forested ecoregions



0 100 km

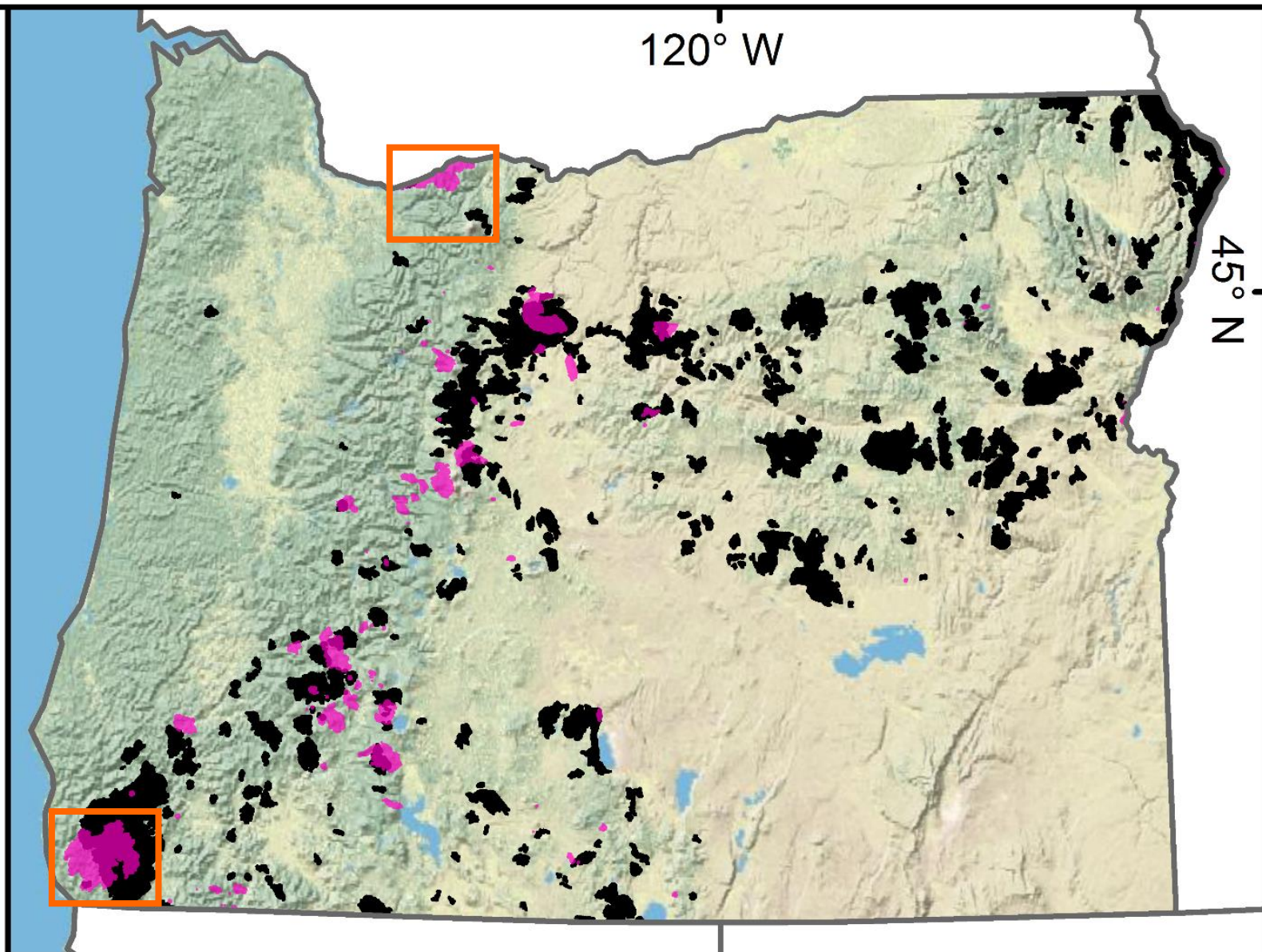



Legend

-  Large fires (2017)
in forested ecoregions
-  Large fires (1984-2015)
in forested ecoregions



0 100 km





Eagle Creek Fire, by the numbers

- [Ignition](#): teenager with fireworks on Eagle Creek Trail (September 2)
- Extreme fire behavior including spotting across the Columbia Gorge
- [RAVG](#) extent: 48,000 acres
- [RAVG](#) severity: 58% low, 12% moderate, 30% high
- Economic impacts: huge (See OFRI report)
- Social response: dramatic

Idiot With Fireworks Starts Columbia River Gorge Fire That Strands 150 Hikers and Threatens Town of Cascade Locks

The fire has consumed 3,000 acres of pristine forest that Portlanders treat as a playground.



OREGON WILDFIRES

Eagle Creek fire zero percent contained as Red Cross shelters evacuees

Updated Sep 5, 2017; Posted Sep 4, 2017

OREGON WILDFIRES

Eagle Creek Fire jumps across Columbia River from Oregon to Washington

GILLIAN FLACCUS and NICHOLAS K. GERANIOS, Associated Press Published 9:47 a.m. PT Sept. 5, 2017 | Updated 9:19 p.m. PT Sept. 5, 2017

Heat + smoke = unusual problem for schools in Eagle Creek fire's range

Updated Sep 6, 2017; Posted Sep 6, 2017

statesman journal

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Weather brings relief to Chetco Bar Fire, Eagle Creek Fire now No. 1 priority in nation

Whitney Woodworth, Statesman Journal Published 4:31 p.m. PT Sept. 7, 2017 | Updated 10:28 p.m. PT Sept. 7, 2017

Eagle Creek fire: Smoke-socked Portland could see reprieve as winds shift

Updated Sep 6, 2017; Posted Sep 6, 2017



Oregon's air quality index ranged from hazardous to unhealthy for sensitive groups across much of the state on Wednesday.(AIRNow)

Eagle Creek Fire 100 Percent Contained

by Ericka Cruz Guevarra [Follow](#) OPB Nov. 30, 2017 2:39 p.m.

Westbound I-84 now open in certain areas

Whitney Woodworth, Statesman Journal Published 12:28 p.m. PT Sept. 8, 2017 | Updated 7:17 p.m. PT Sept. 14, 2017

What A Scientist Lost In The Eagle Creek Fire

by Ericka Cruz Guevarra [Follow](#) OPB Nov. 1, 2017 11:30 a.m. | Updated: Nov. 1, 2017 4:42 p.m.

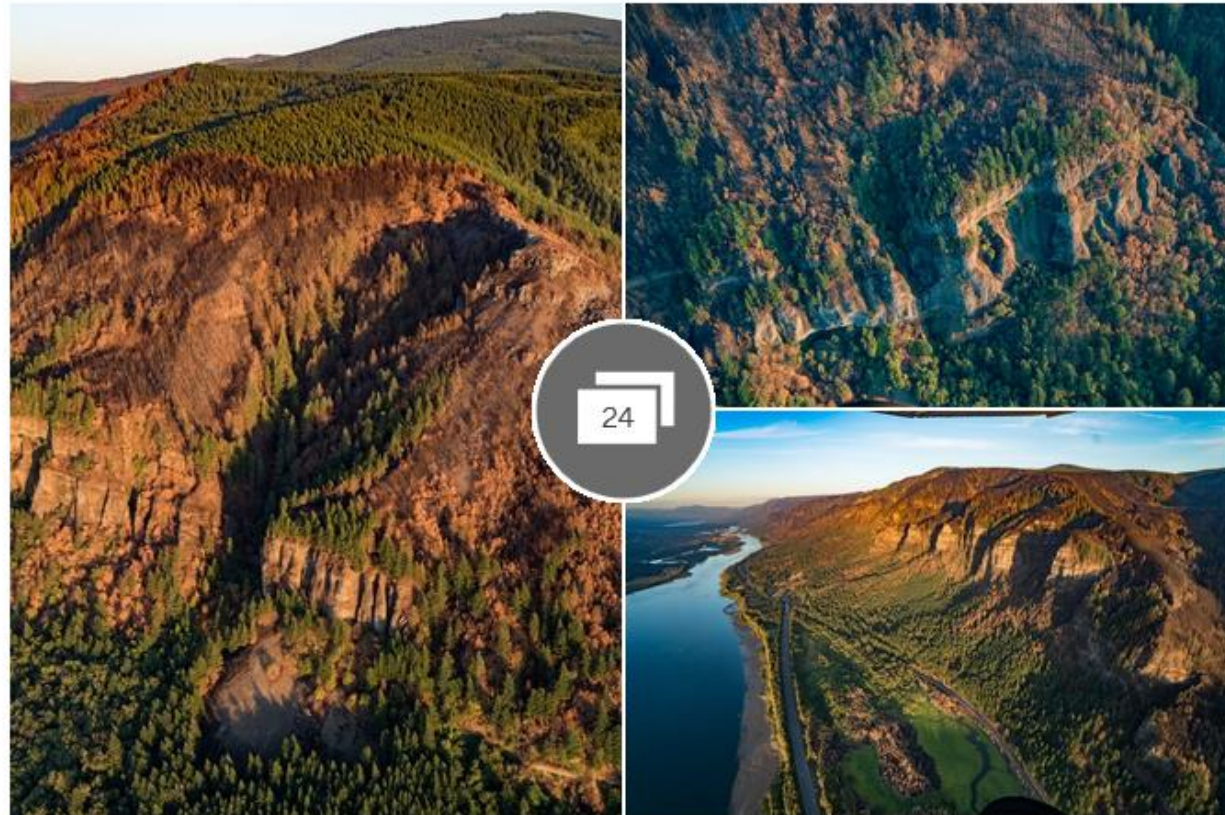
OUTDOORS

Teen charged in Eagle Creek fire apologizes in court

Wed., Feb. 21, 2018, 5:55 p.m.

Flight over Eagle Creek fire reveals scorched swaths and seas of green

Updated Sep 24, 2017; Posted Sep 24, 2017

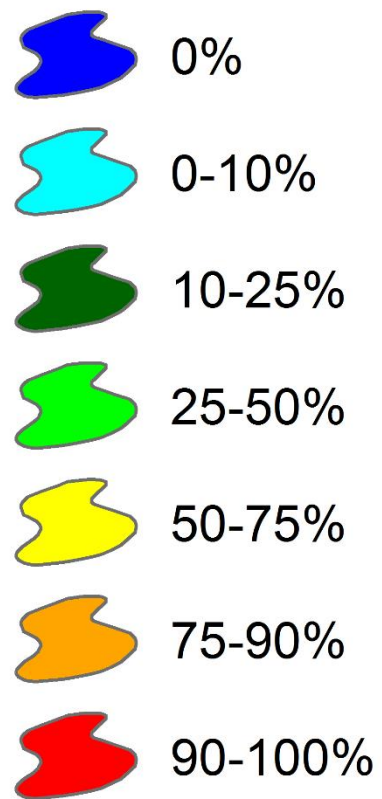


Gallery: Aerial view of Eagle Creek fire damage

[2017 Eagle Creek Fire flyover \[online\]](#)

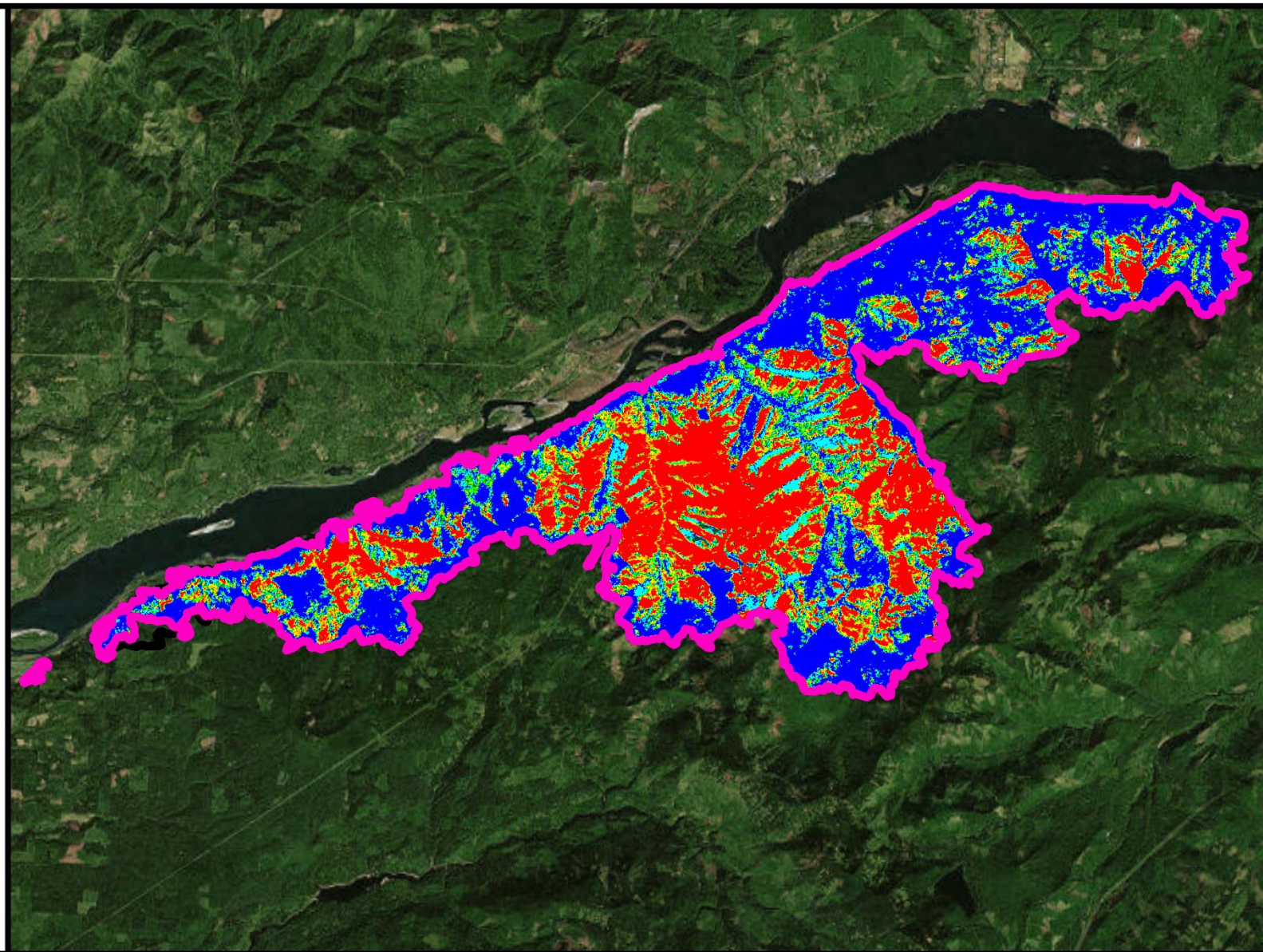


Severity (RAVG BA loss)



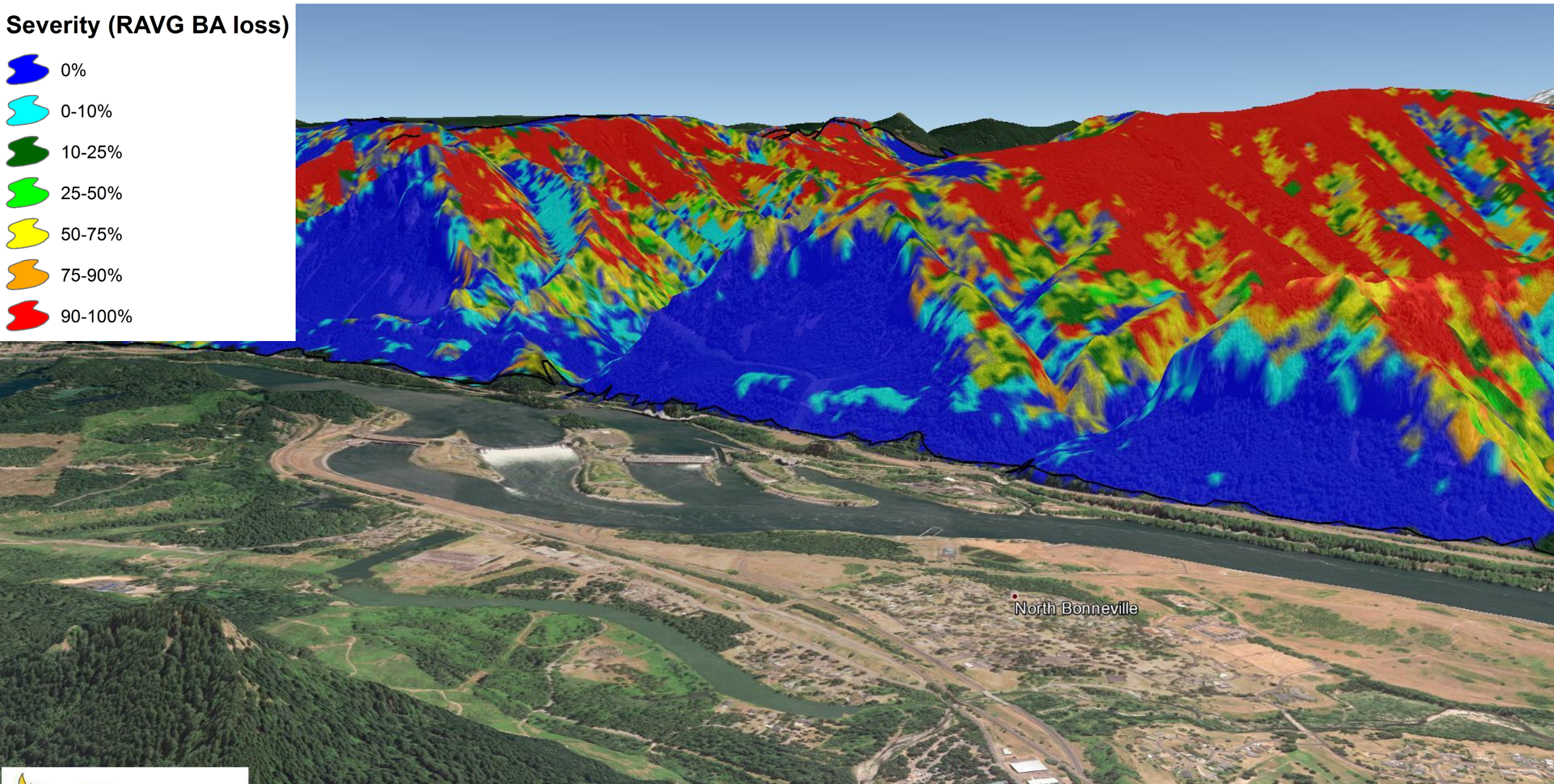
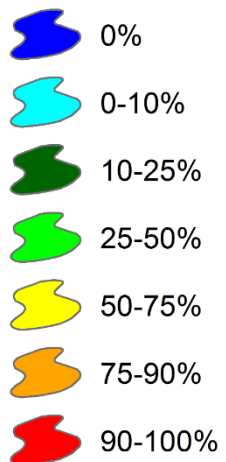
0

10 km

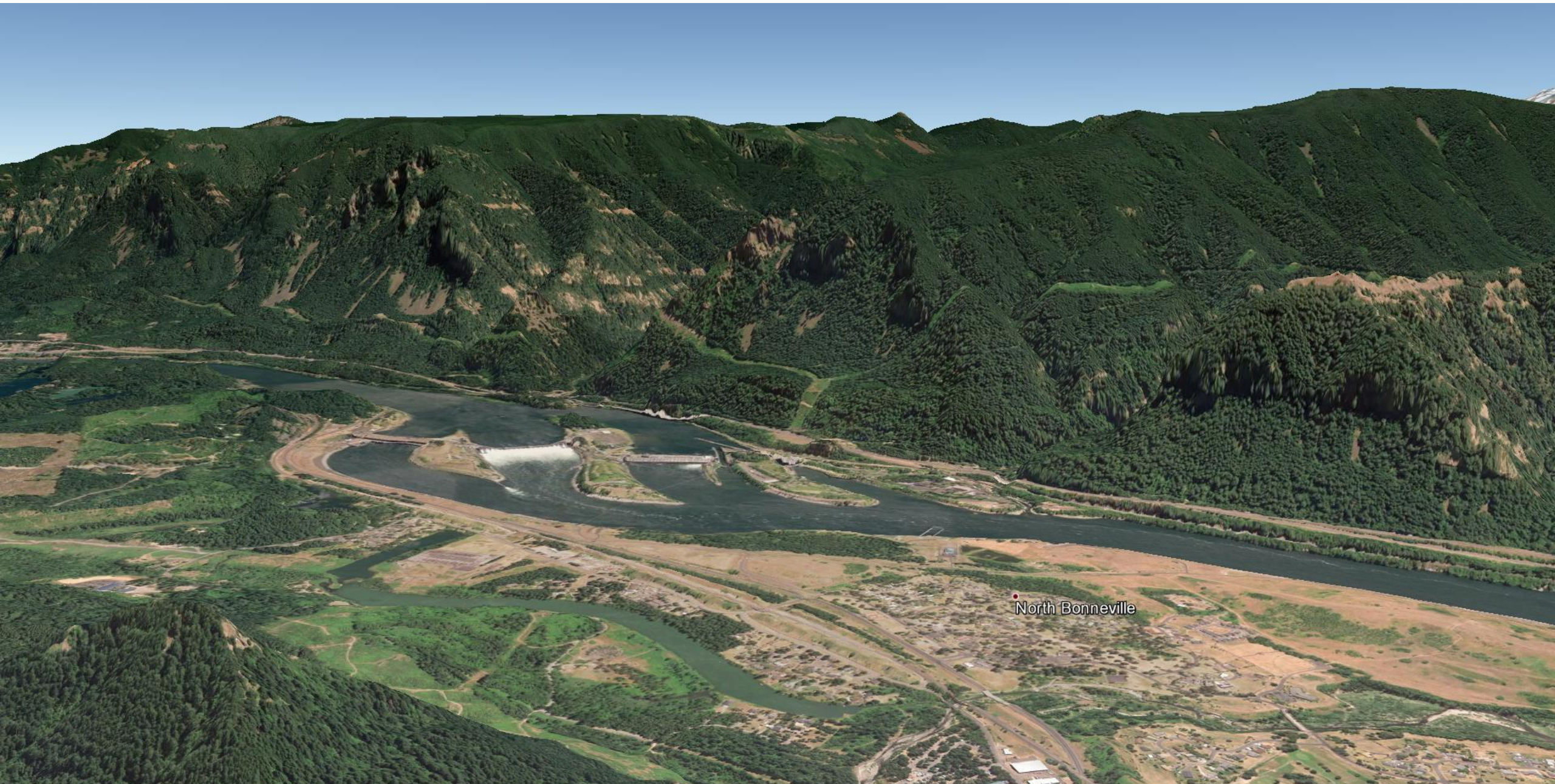


Eagle Creek landscape (Google Earth, RAVG)

Severity (RAVG BA loss)



Eagle Creek landscape (Google Earth, pre-fire)





Eagle Creek landscape (Osborne, 1941)



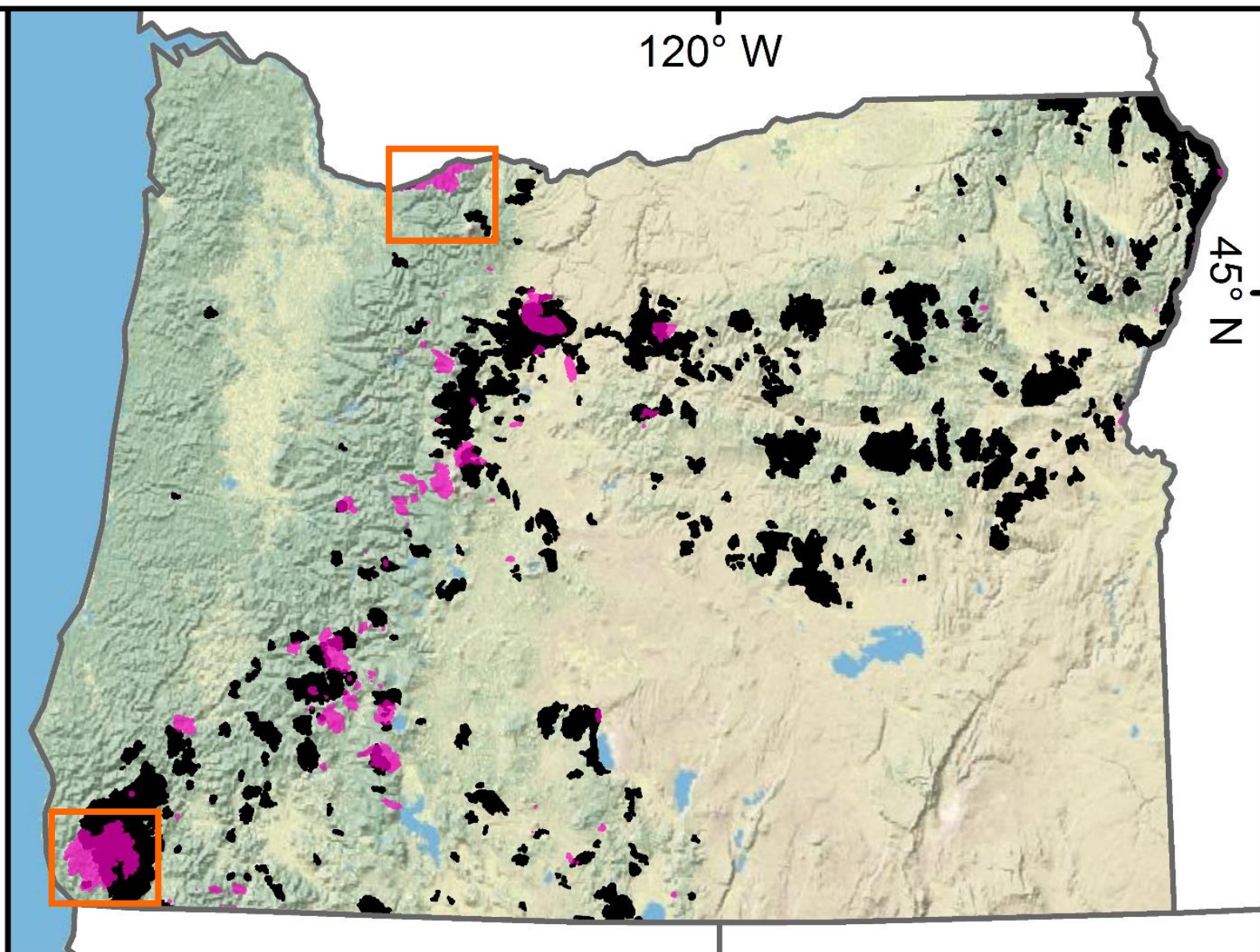
L Aldrich Bu. HI=1100+ +4 Mt. H. N.F. Reinhardt 7.7.41


Legend

-  Large fires (2017)
in forested ecoregions
-  Large fires (1984-2015)
in forested ecoregions



0 100 km





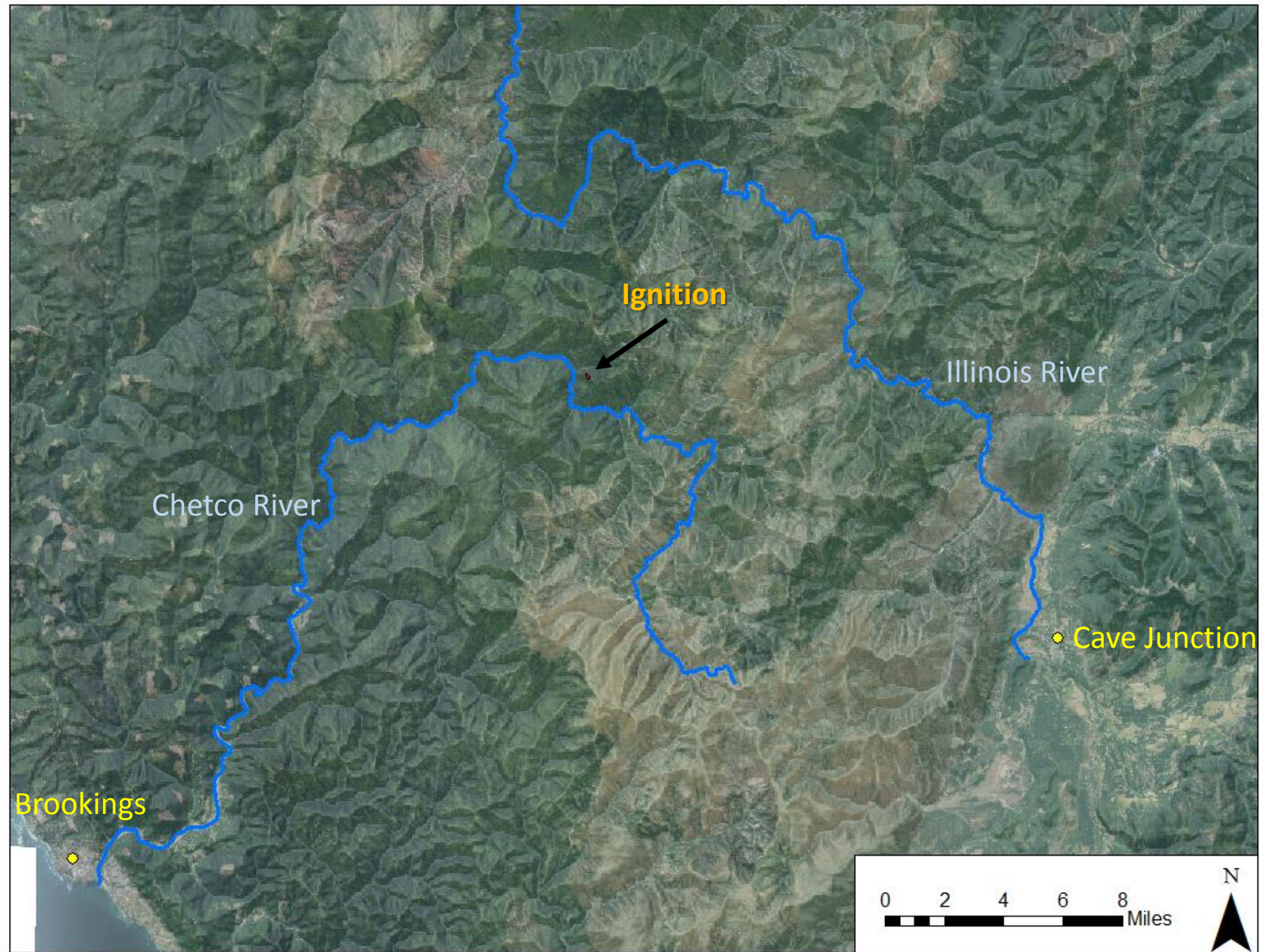
Chetco Bar Fire, by the numbers

- [Ignition](#): lightning in wilderness (July 12)
- [RAVG](#) extent: 195,000 acres
- [RAVG](#) severity: 52% low, 16% moderate, 32% high
- Economic impacts: large
- Social response: moderate

2017 Chetco Bar Fire

Discovered by commercial airline pilot on July 12th, 2017

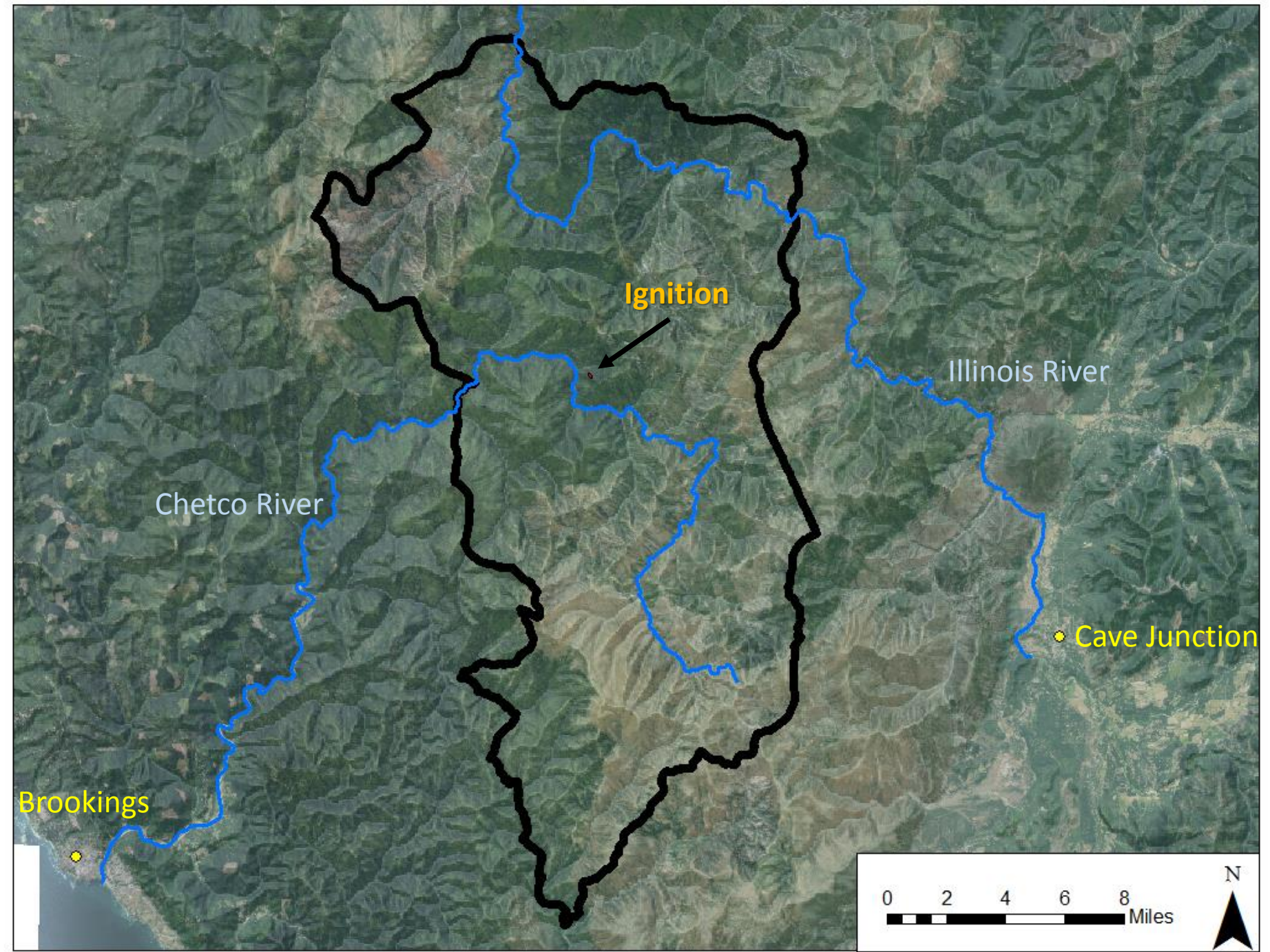
Approximately 6 acres by 4pm on July 13th, 2017 as depicted here





2017 Chetco Bar Fire

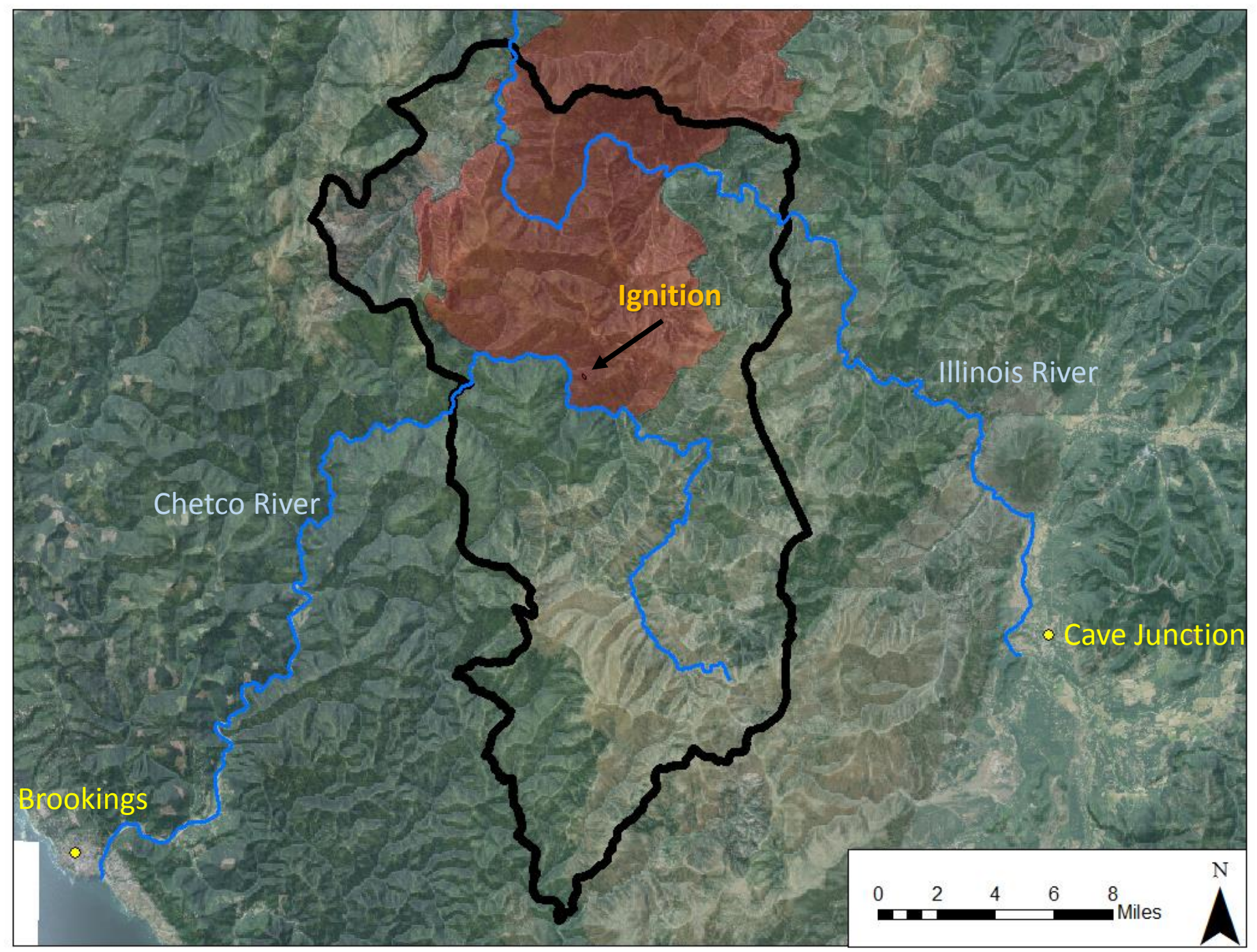
In the middle of the
Kalmiopsis
Wilderness





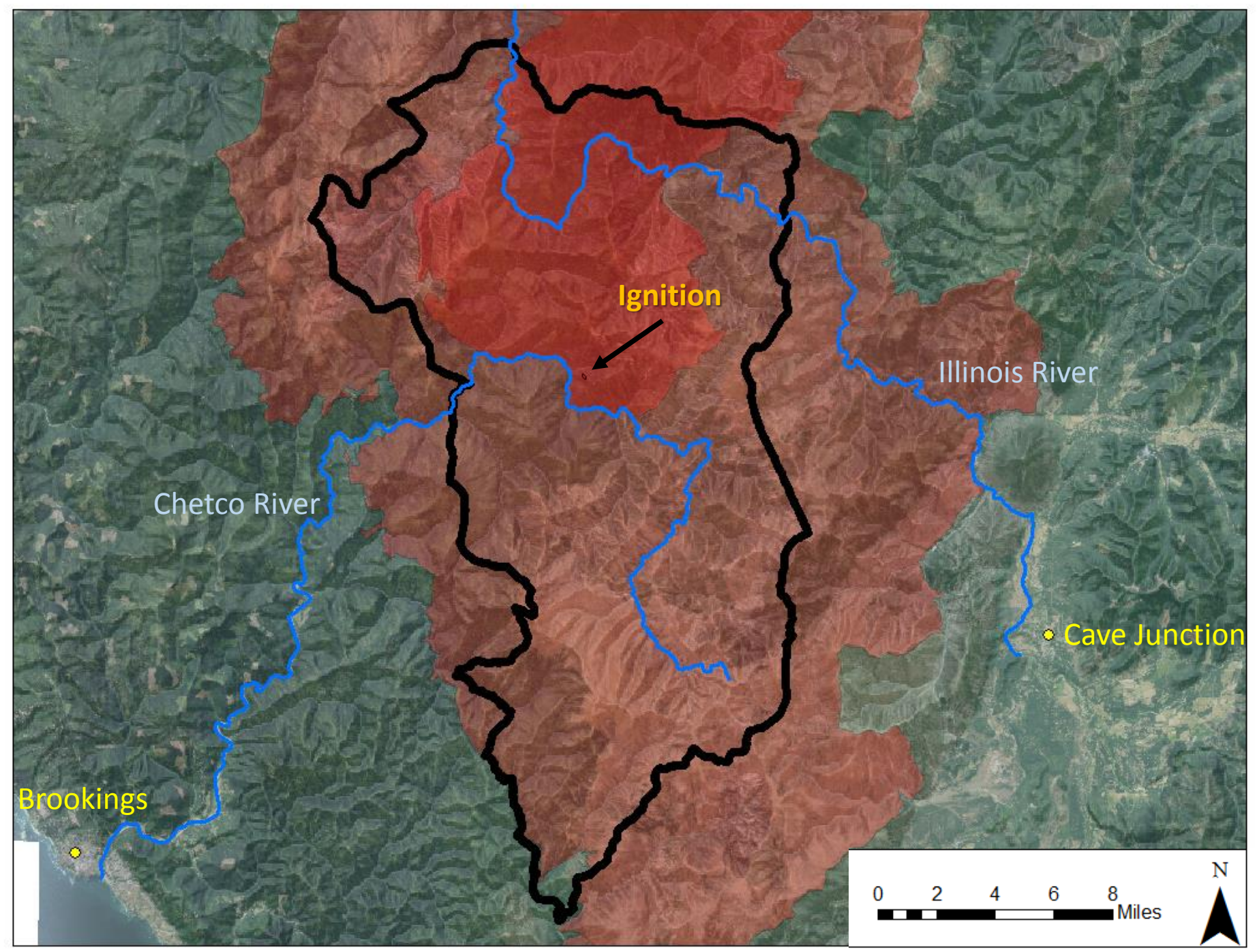
2017 Chetco Bar Fire

Also within the 1987
Silver Fire burn scar



2017 Chetco Bar Fire

Not only that, it was
also in the middle of
the 2002 Biscuit Fire
scar!



[2017 Sheep Springs Fire drone video \[online\]](#)



**Sheep Springs Fire
Sisters Ranger District
2017**

Significant resistance to control



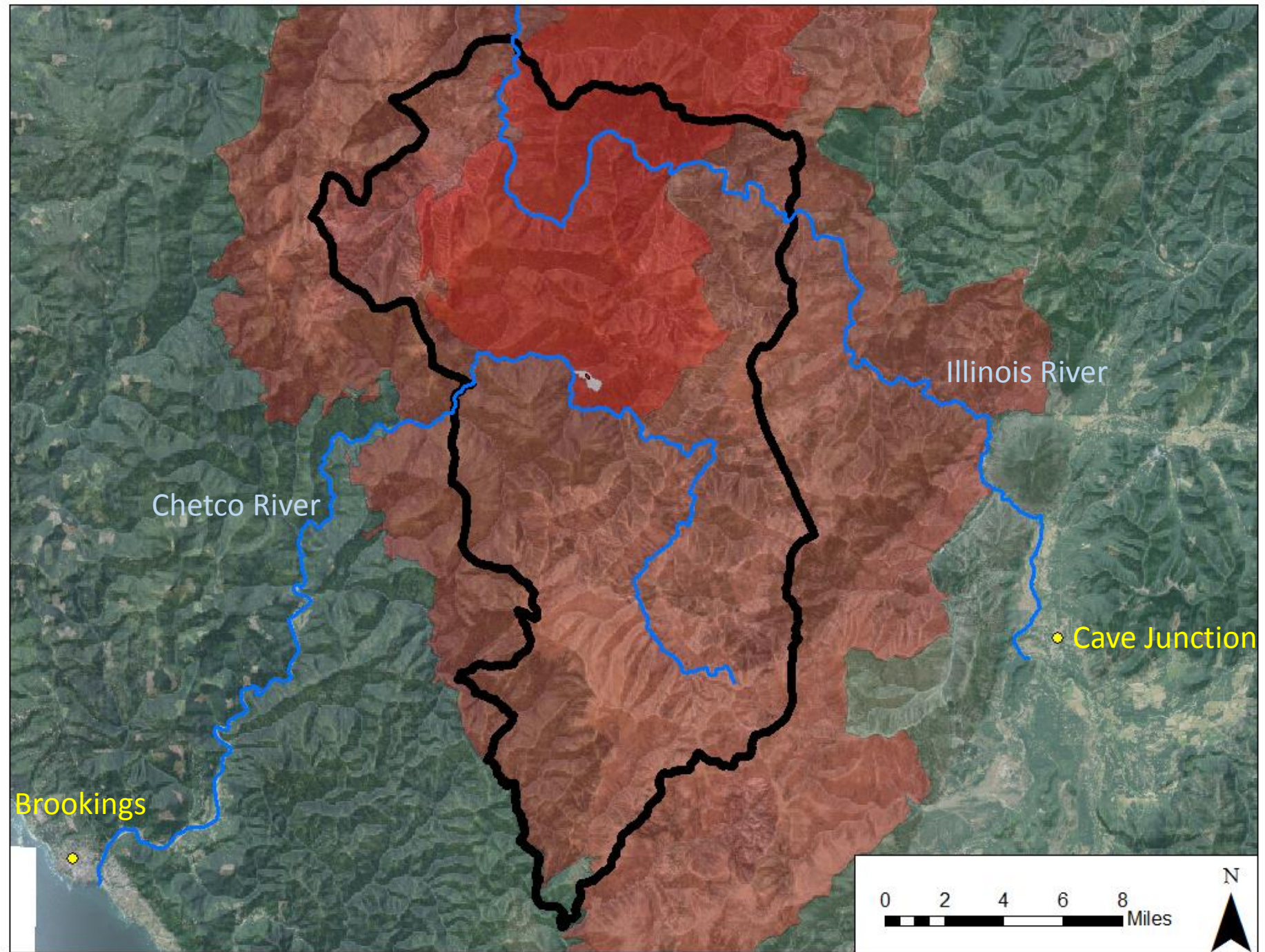
Photos: James Johnston



2017 Chetco Bar Fire

7/19/2017

207 ac

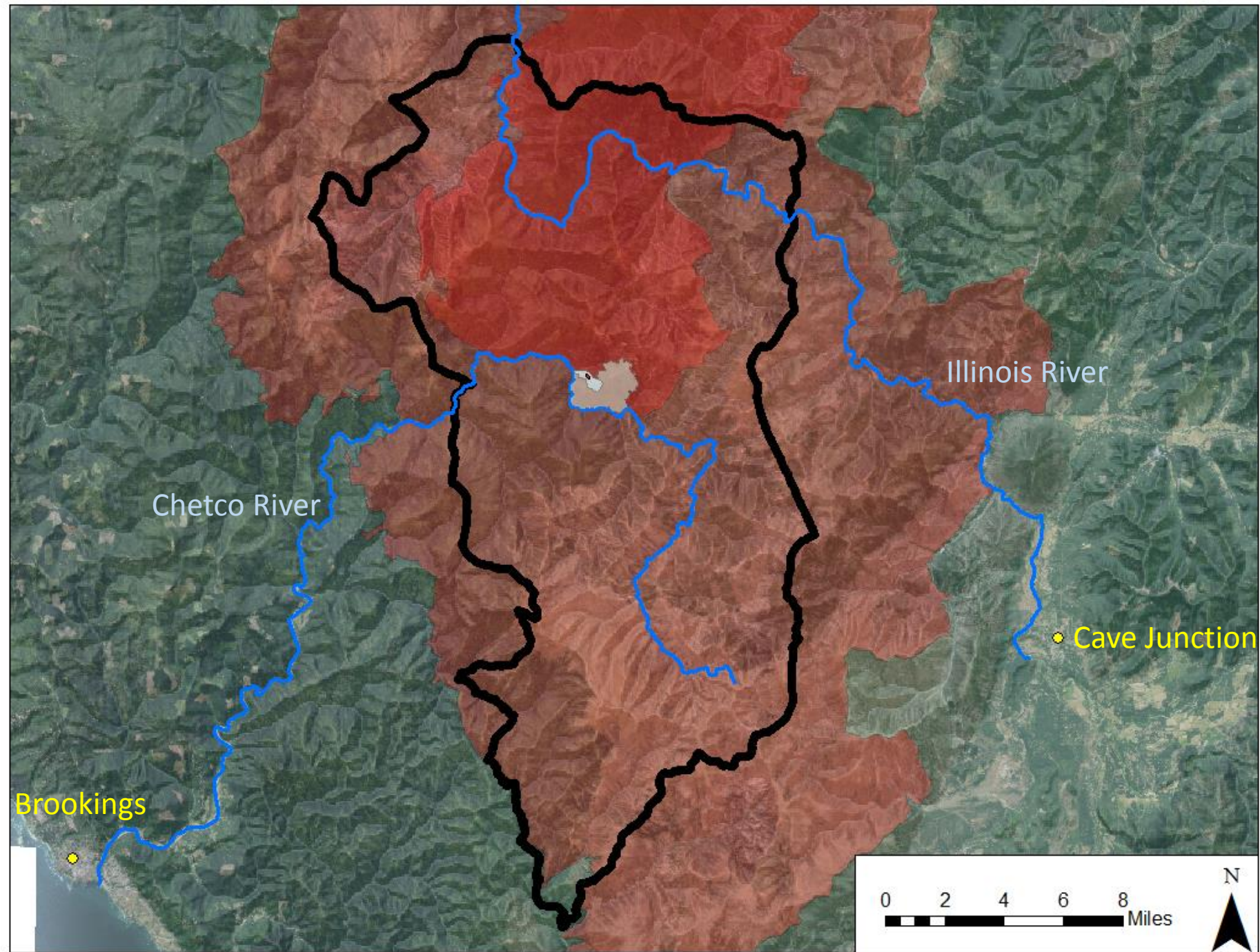




2017 Chetco Bar Fire

7/25/2017

1,840 ac

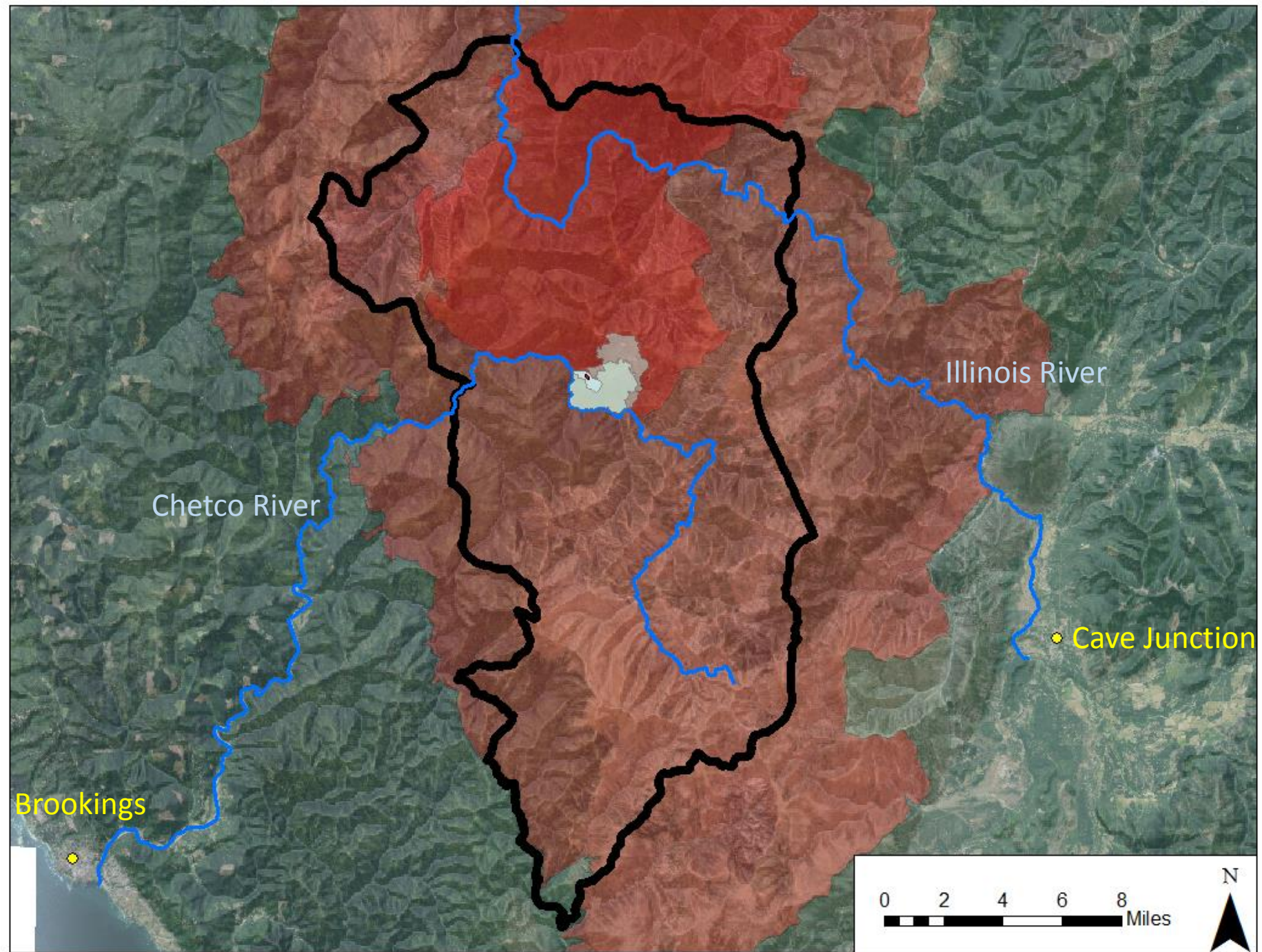




2017 Chetco Bar Fire

8/02/2017

2,984 ac

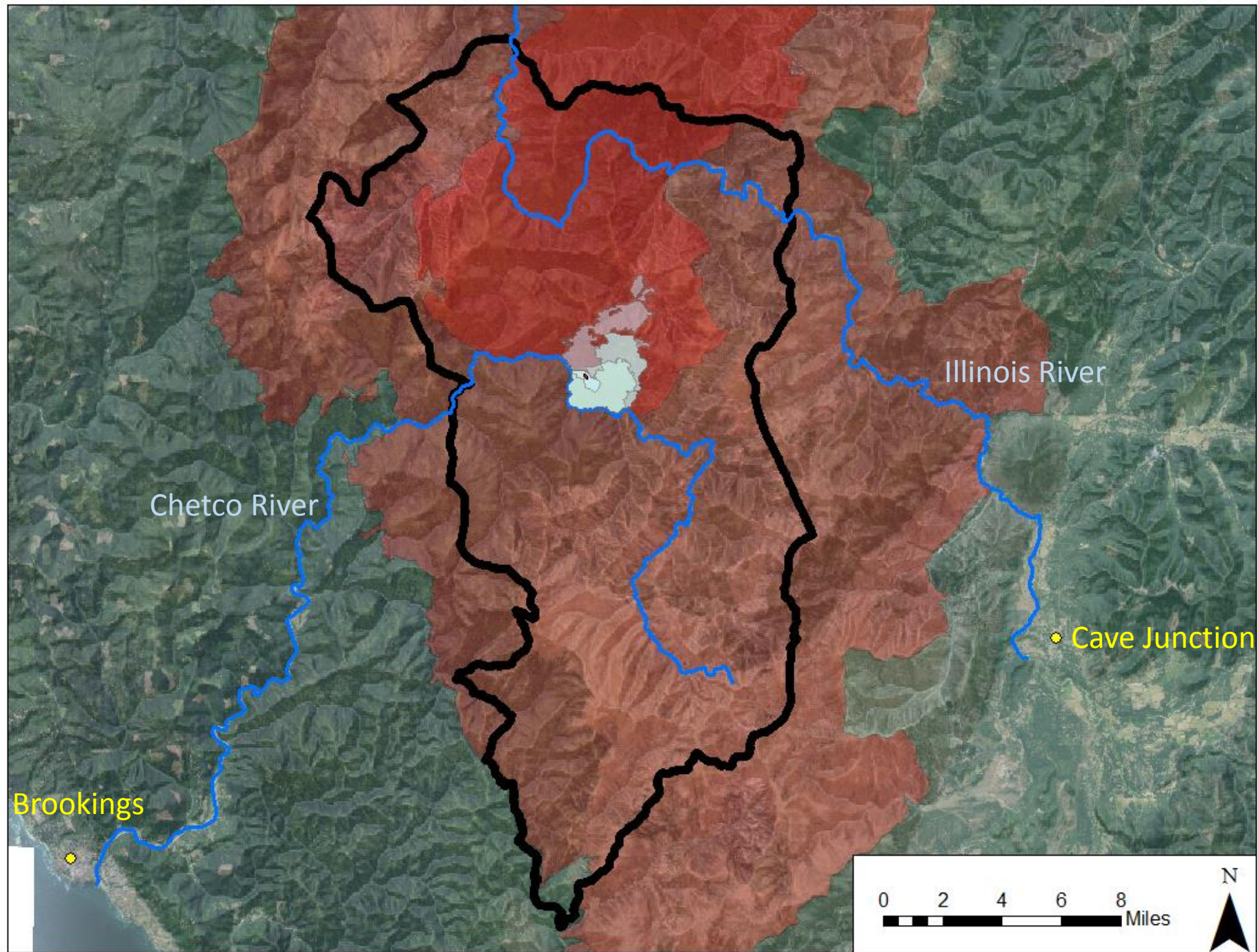




2017 Chetco Bar Fire

8/09/2017

5,040 ac

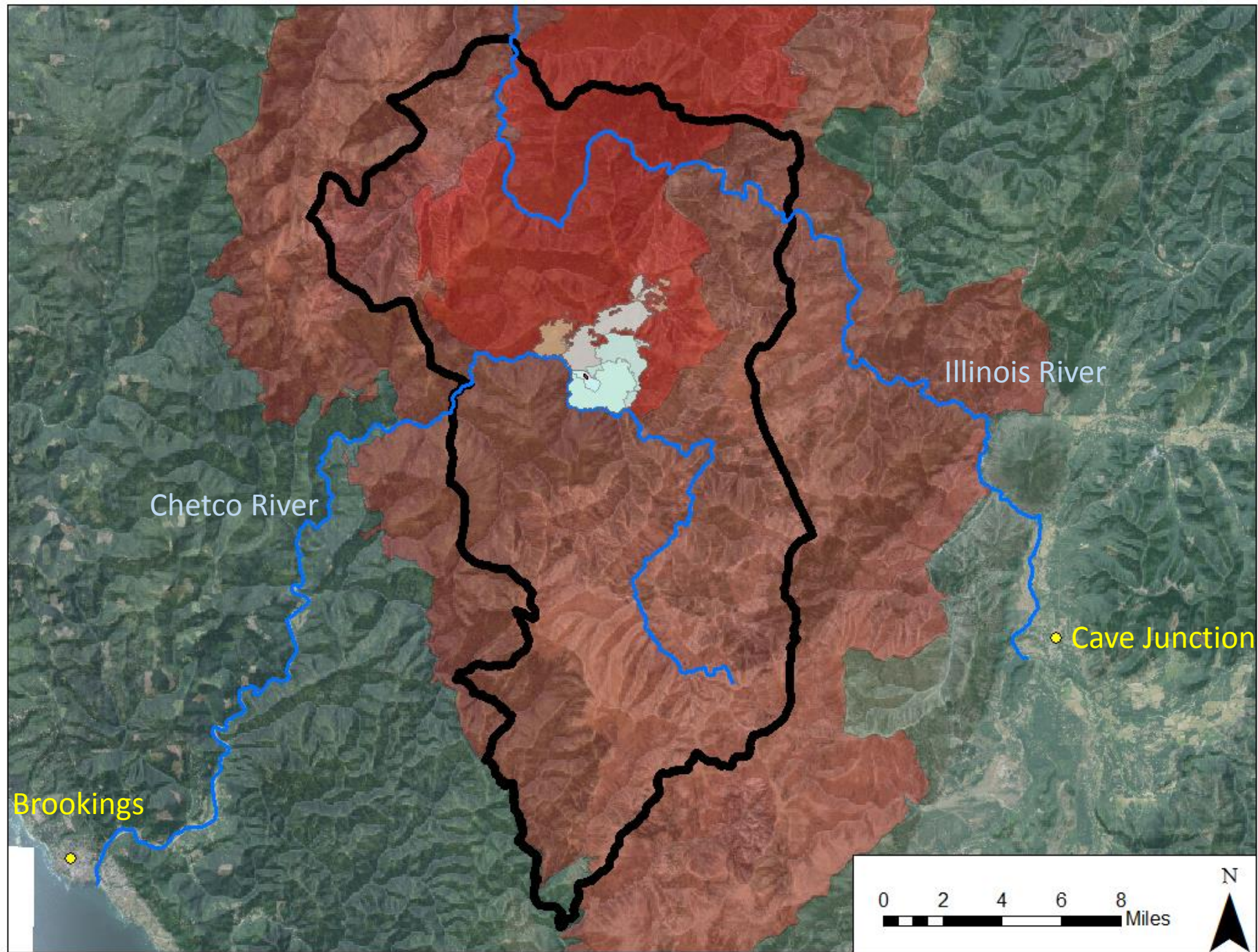




2017 Chetco Bar Fire

8/15/2017

6,016 ac

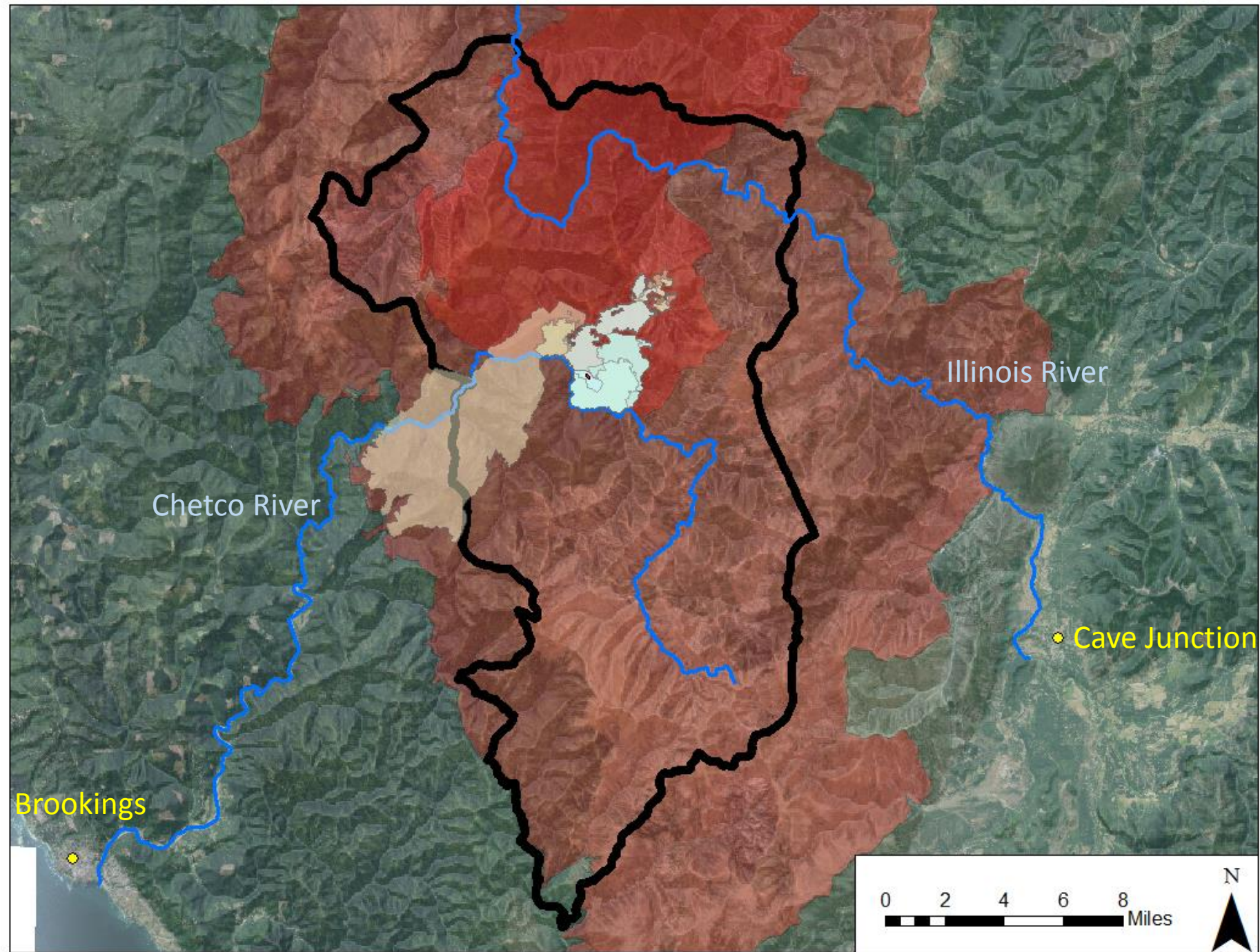




2017 Chetco Bar Fire

8/18/2017

22,042 ac

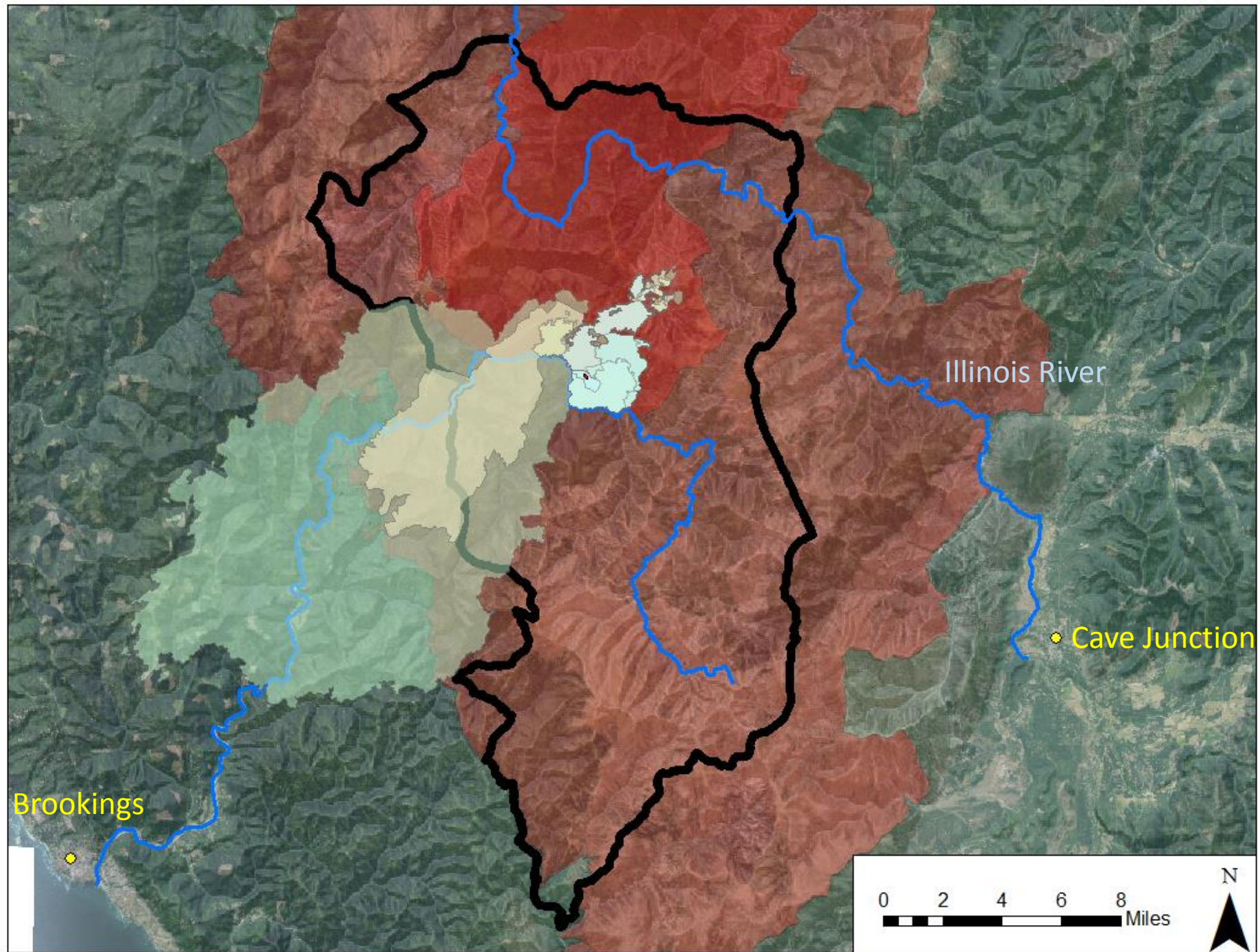




2017 Chetco Bar Fire

8/20/2017

91,551 ac



[2017 Chetco Bar Fire Plume \[online\]](#)

Chetco Bar Fire - AMAZING drone footage by Shane Stiles Photography

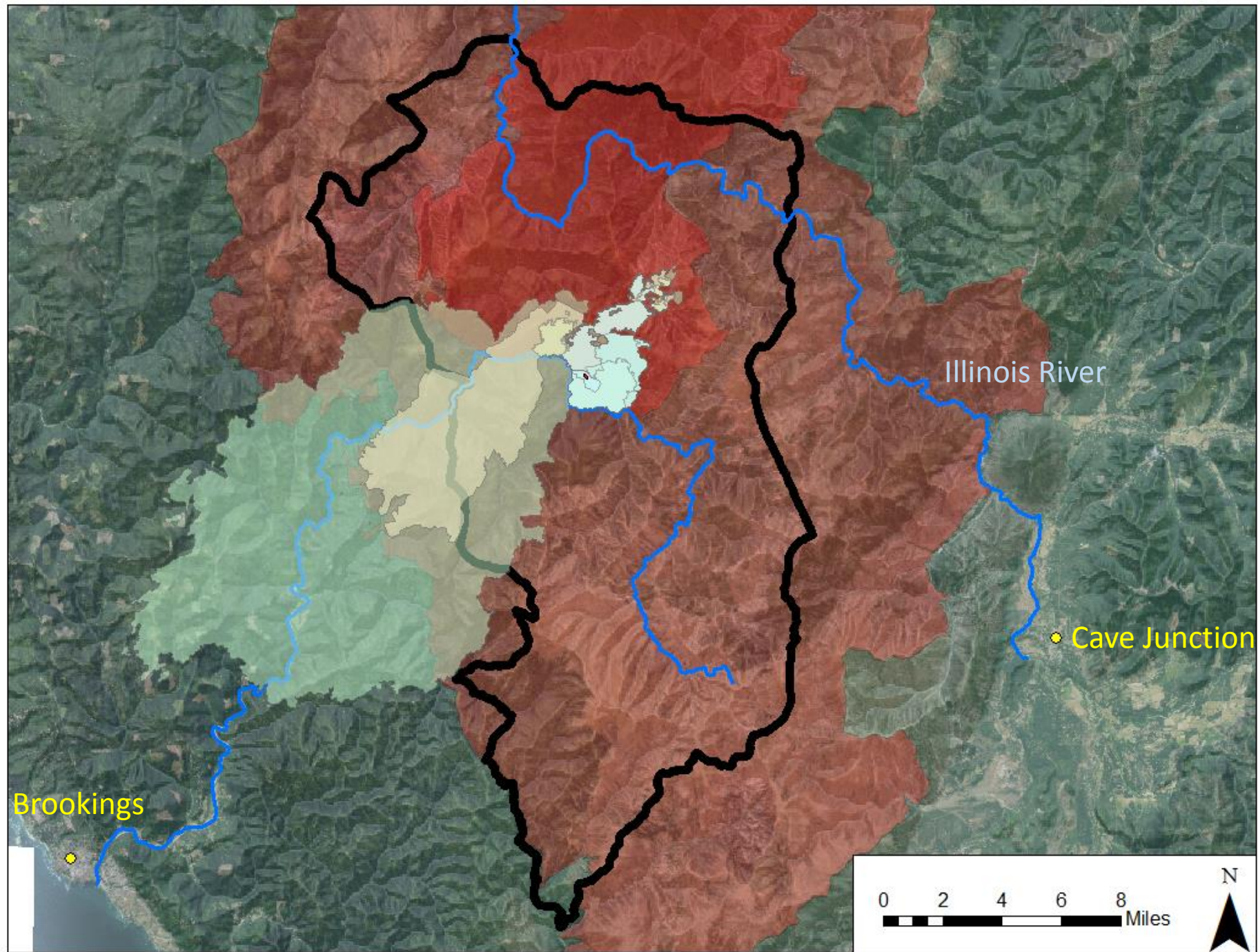




2017 Chetco Bar Fire

8/20/2017

91,551 ac

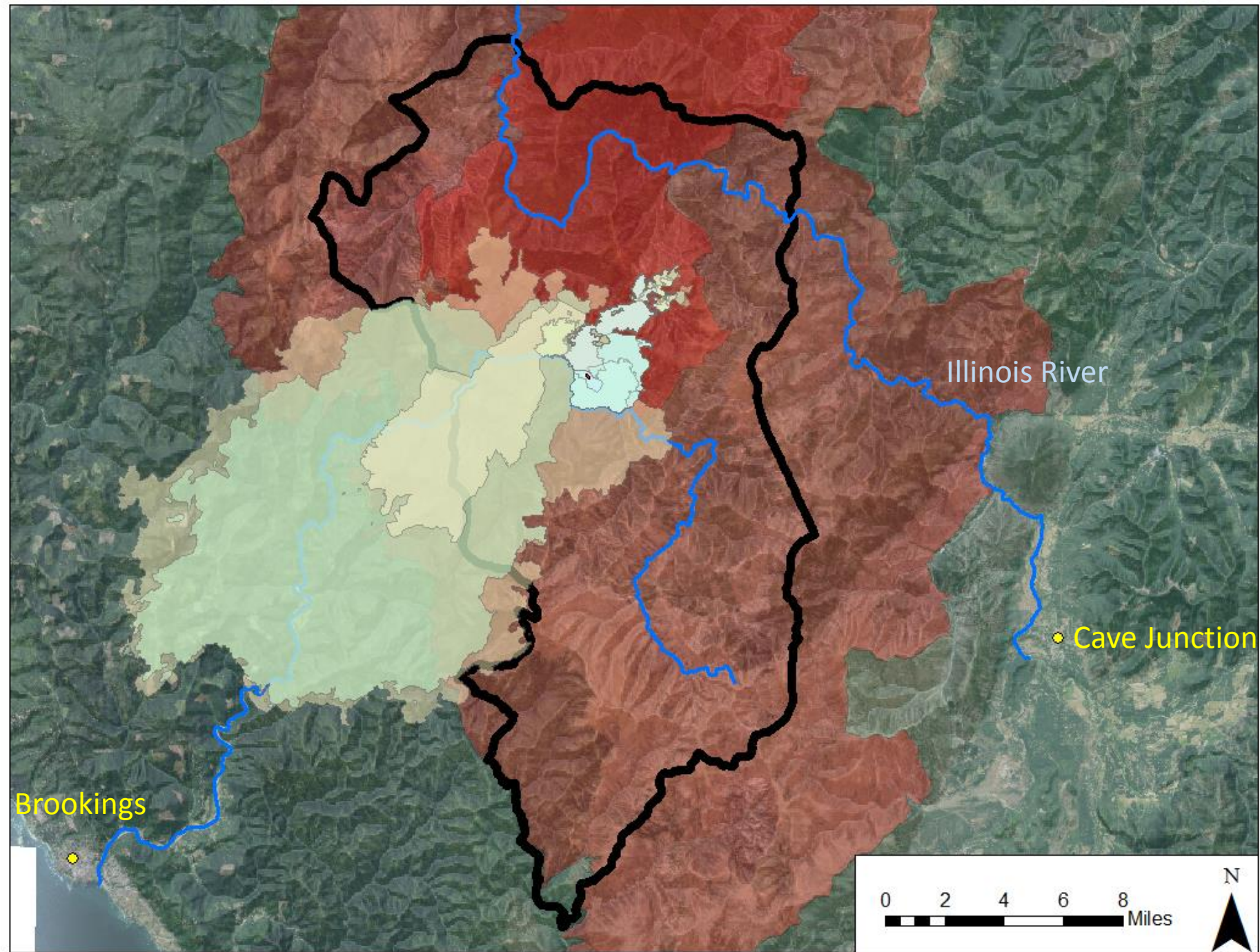




2017 Chetco Bar Fire

8/27/2017

117,669 ac

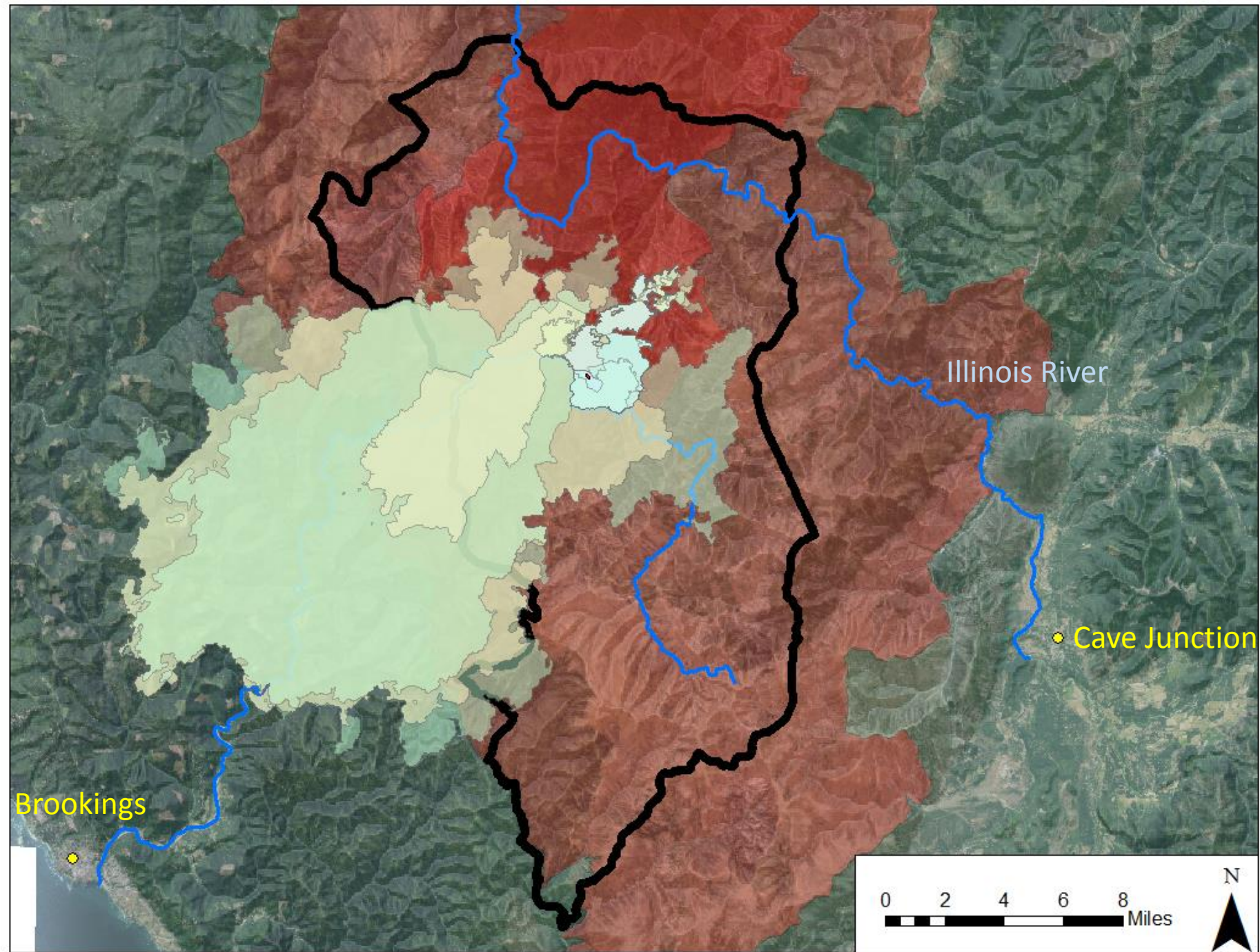




2017 Chetco Bar Fire

9/02/2017

143,760 ac

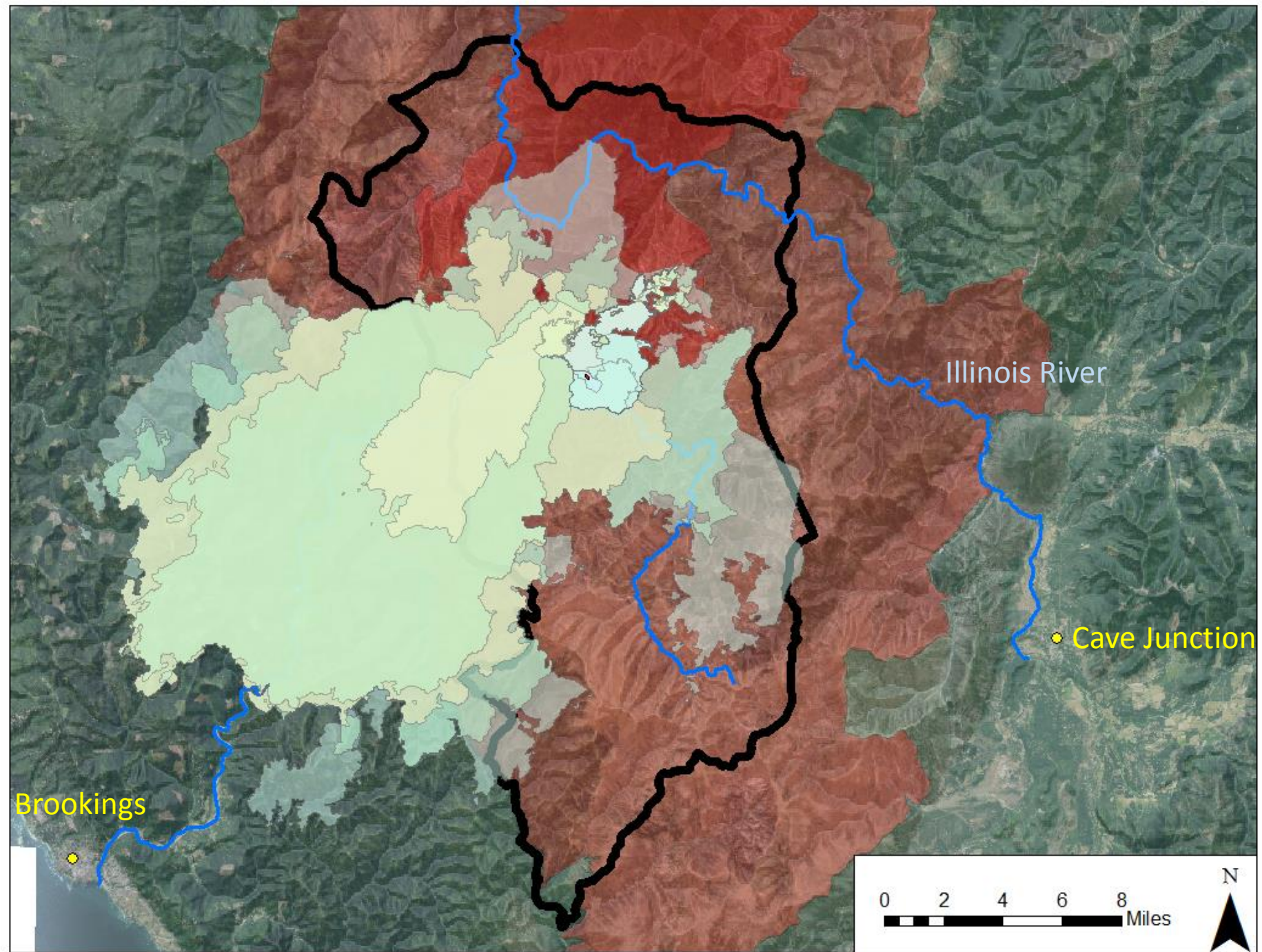




2017 Chetco Bar Fire

9/09/2017

184,207 ac

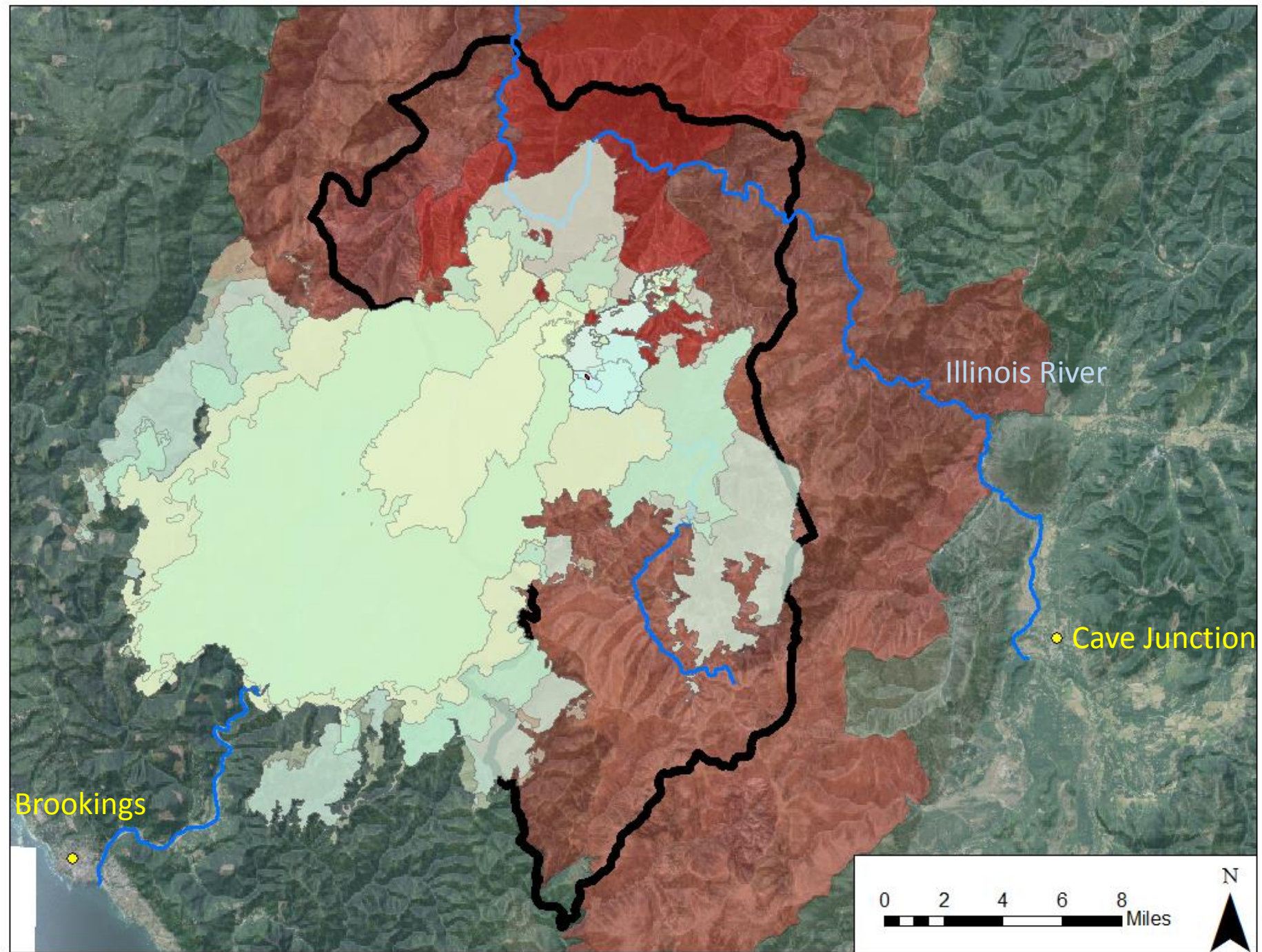




2017 Chetco Bar Fire

9/17/2017

190,629 ac

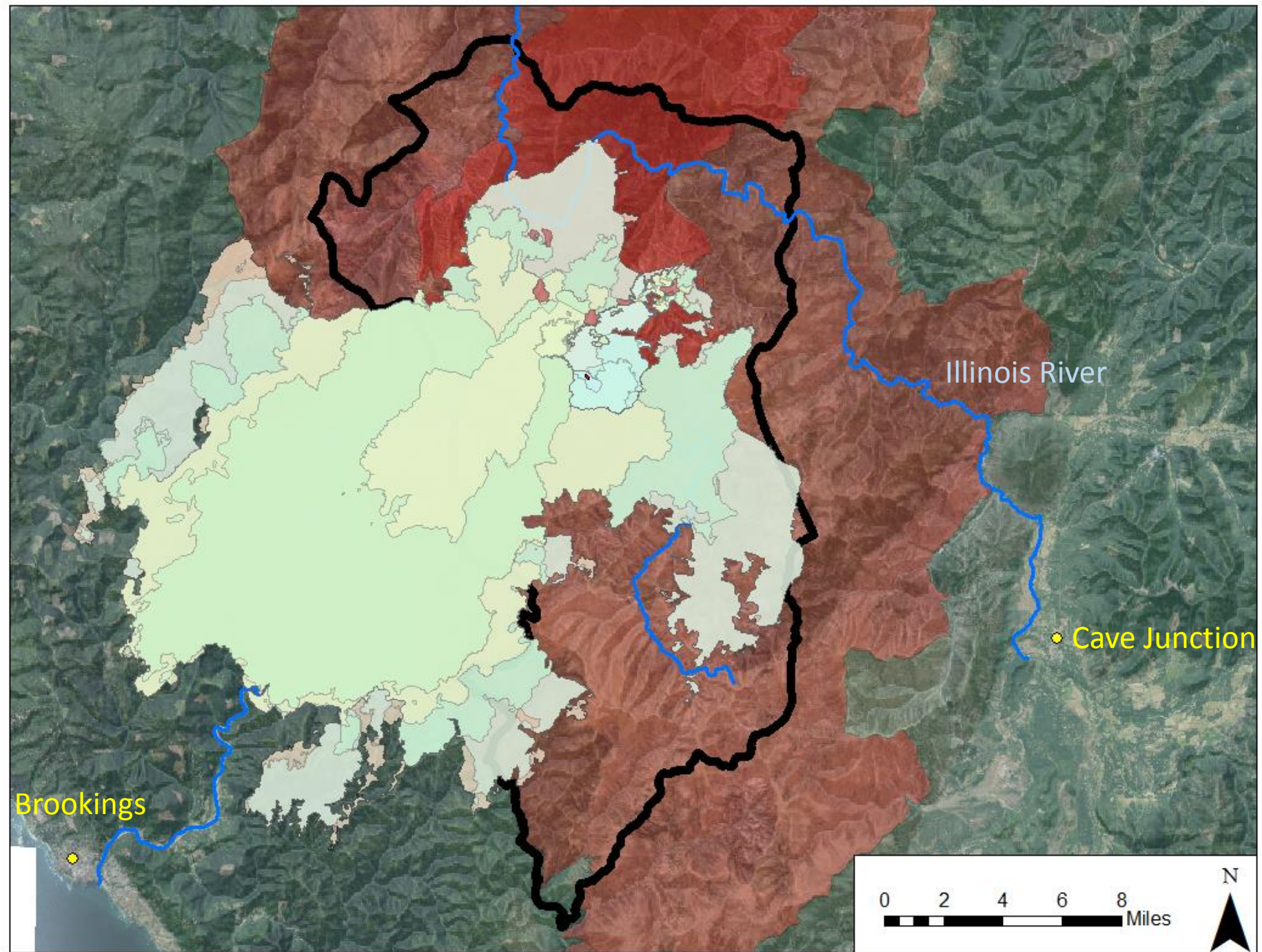




2017 Chetco Bar Fire

10/17/2017

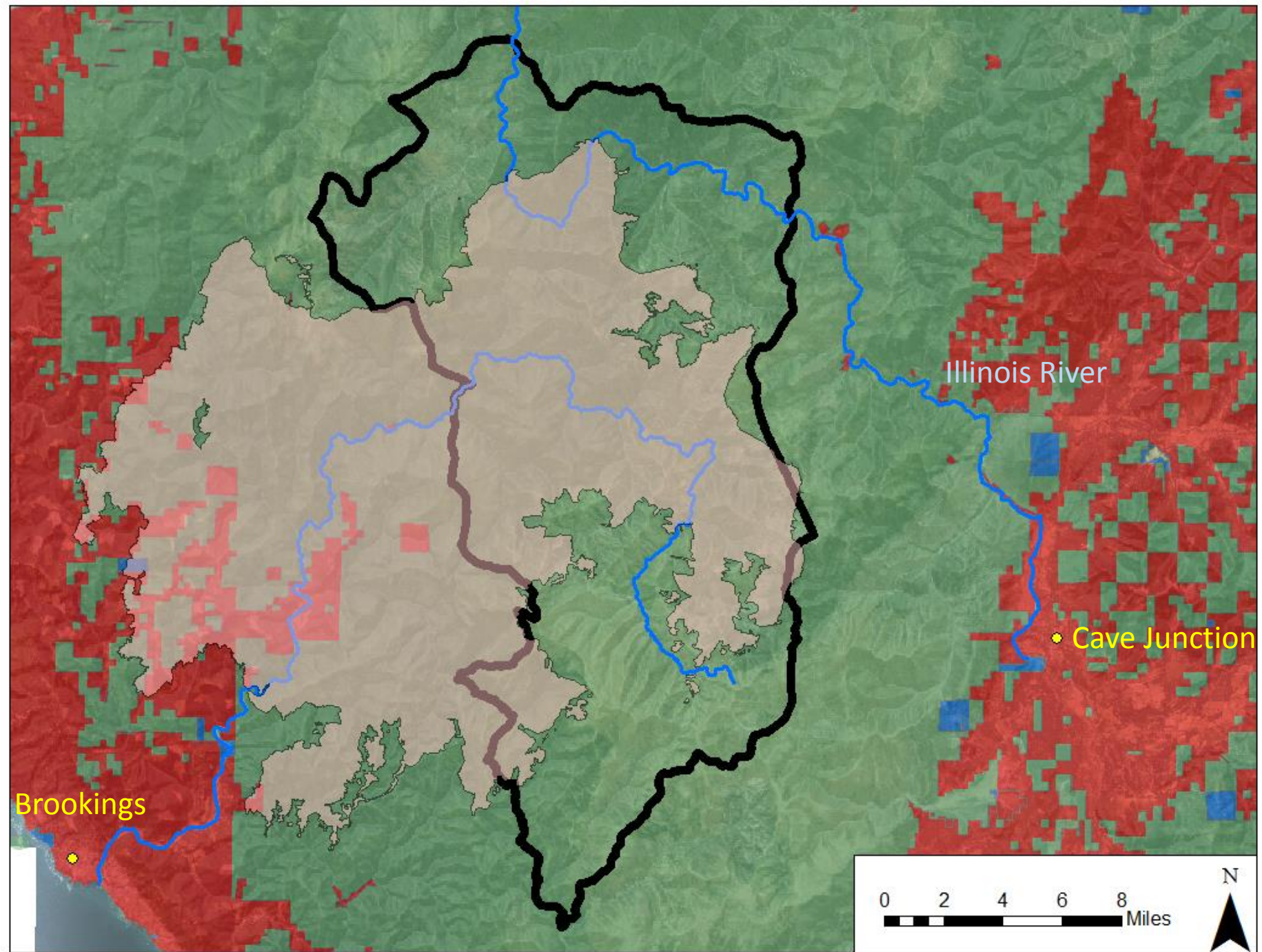
191,125 ac



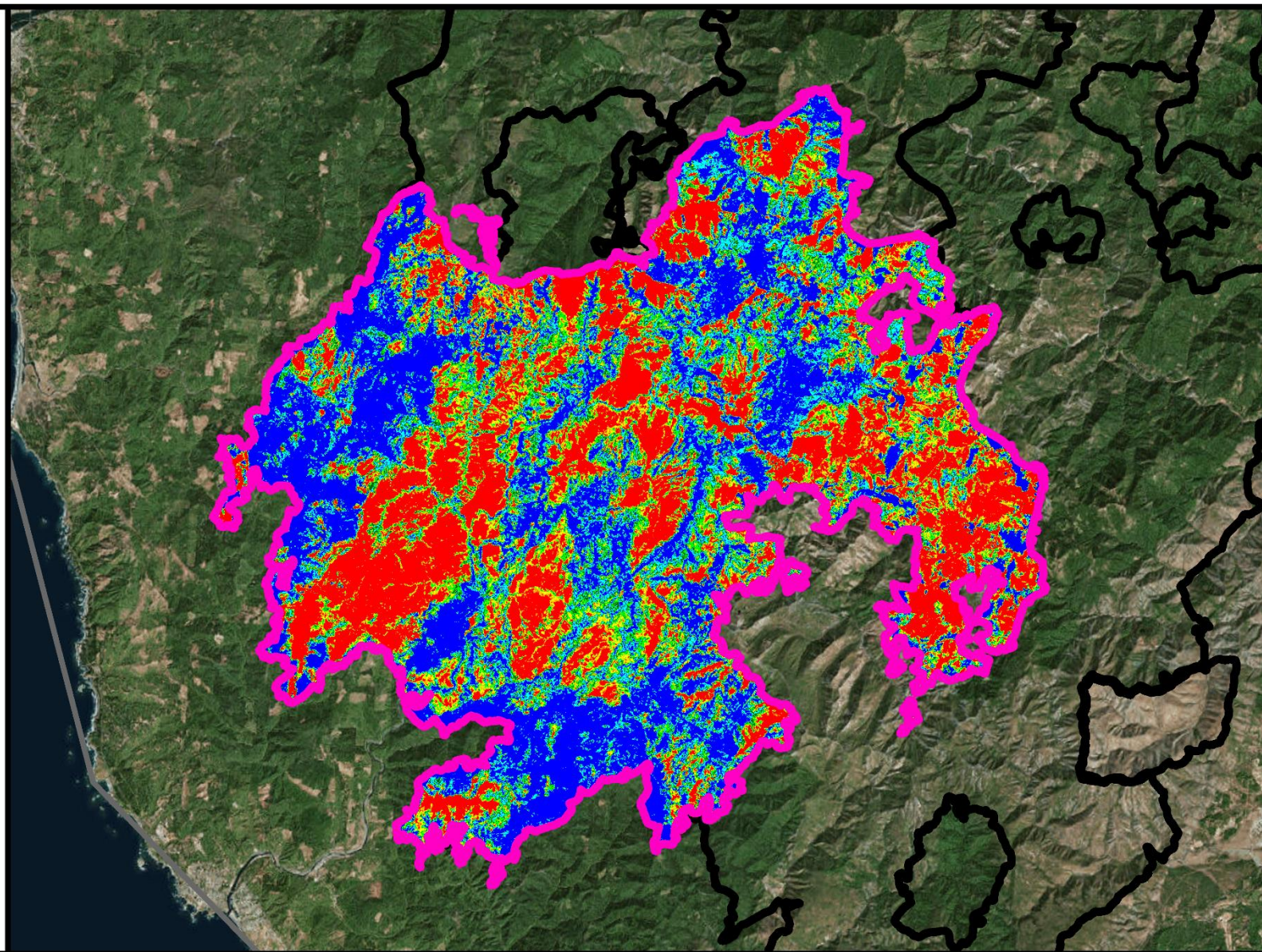
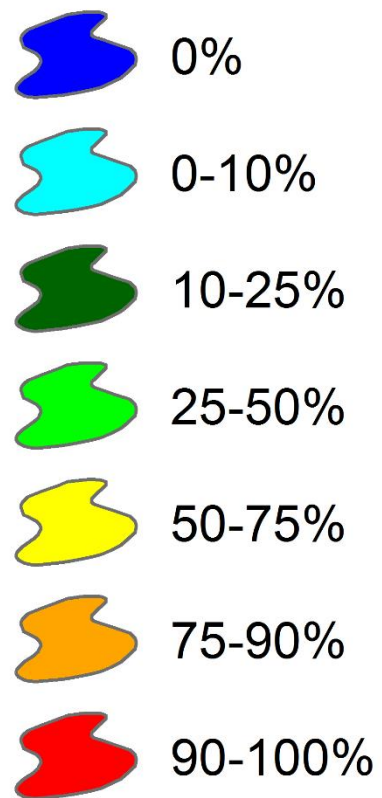


2017 Chetco Bar Fire

BLM – 6,767 ac
State – 225 ac
Private – 15,243 ac
USFS – 168,886 ac



Severity (RAVG BA loss)





7850

JOHNSON BU.

H.I.

+4 1/2'

SISKIYOU N.F.

11-7-36



300 310 320 330 340 350 0 10 20 30 40 50 60

7957 VULCAN PK. H.I. 4561' + 4' SIKIYOU N.F. 6-26-37

Peace Tree

On September 9, 1942, a Japanese submarine surfaced before dawn off the California coast, and catapulted two Japanese naval pilots from its deck in a tiny, bomb-laden floatplane.

Their mission: Drop incendiary bombs on the forest inland from Brookings.



Peace Tree

A lookout near Mount Emily heard the Japanese plane, which he said sounded "like a Model A Ford, backfiring in the distance," and later reported a smoke in the area.

Four firefighters were dispatched to the scene and extinguished the fire the same day. The firefighters recovered steel and thermite shards from the bomb.

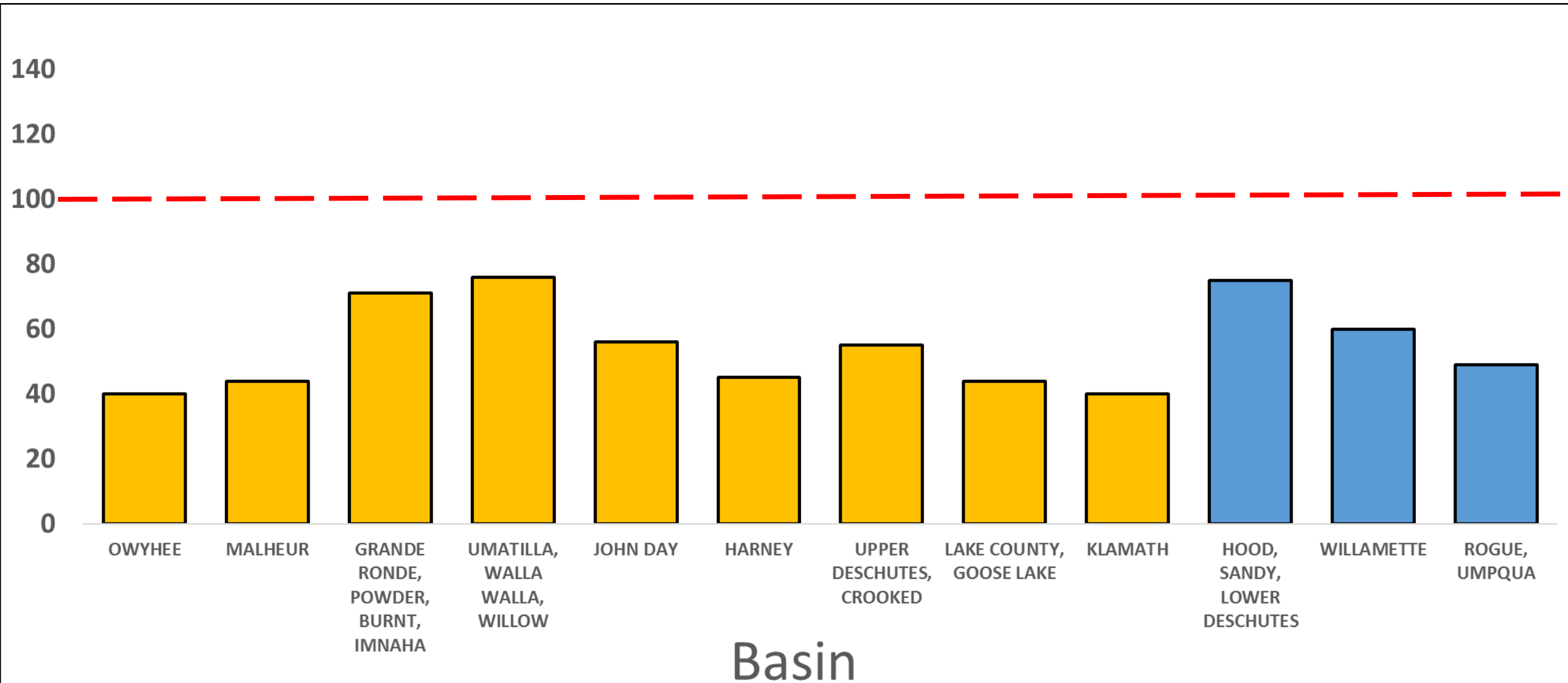
In 1962, the Japanese pilot, Nobuo Fujita, was invited to Brookings, where he presented his family's priceless 400-year-old Samurai sword to the city as a gesture of peace.



Peace Tree survives!



Feb. 27th, 2018: Basin-wide snowpack (% of 1981-2010 median)





Key points:

- 2017 Oregon fire season was unusual compared to recent decades.
- Wet winter followed by hot, dry summer.
- Geography of fire matters: location, severity, history.
- Regional and local (westside) fire resulted in widespread and severe socioeconomic effects.
- Ecological effects were mixed; fires create mosaics in big fire years.
- In a hotter, drier future, how will we learn to live with fire?

SHOWCASE OF OSU FIRE RESEARCH

EASTSIDE FIRE

- 9:00 Andrew Merschel: *Landscape-scale reconstructions of historical fire regimes in Oregon's dry forests*
- 9:15 James Johnston: *Collaborative Forest Restoration on the Malheur National Forest*
- 9:30 Kayla Johnston: *Fire Exclusion: Destroying Forests for Over a Century – A Look at The Metolius Research Natural Area*
- 9:45 Will Downing: *Conifer Regeneration Following Stand Replacement Wildfire in Oregon's Blue Mountains*

10:00 BREAK

WESTSIDE FIRE

- 10:30 Garrett Meigs: *Fire Refugia in Late-successional Forests*
- 10:45 Lisa Ellsworth: *Fuel Conditions in Unburned, Burned, and Salvaged Forests of Oregon's western Cascades*
- 11:00 Chris Dunn: *Fire Severity across Ownership Boundaries in the 2013 Douglas Complex*
- 11:15 Sara Galbraith: *The effects of fire severity on native bees*
- 11:30 *Forest Industry Perspective on Fire*
Phil Adams, Roseburg

Questions?



Metro-Goldwyn-Mayer

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garrett.meigs@oregonstate.edu