

Fire Suppression Costs

Division of Forestry & Fire Protection



Wildland Fire Suppression Budget

House Finance Committee

Presented by Norm McDonald, Deputy Director and Chief of Fire & Aviation



Clear Fire, Anderson Alaska 2022



Alaska's Wildland Fire Suppression

History

1960	BLM established a contract with the state to provide fire protection on state lands	1998	Alaska Interagency Wildland Fire Management Plan signed- Combined 13 regional plans across the State
1976	State Division of Forestry (DOF) took over fire management responsibility for Kenai and Anchorage areas	2004	Largest recorded fire season in Alaska History: 6.59 million acres burned
1981	Department of Natural Resources (DNR) Division of Forestry was formed. A single branch covered forestry and assumed fire protection for Mat-Su Valley, Copper River, Delta, and Fairbanks areas	2010	Alaska Master Agreement / Annual Operating Plan signed
1982	Division of Forestry's jurisdiction expanded to include the Southwest and the Kenai-Kodiak areas	2019	Statute changed to expand Division of Forestry's responsibilities from protecting natural resource values to include all Alaskan values at risk: homes, infrastructure, communities
1985	DNR assumes protection of McGrath Area	2021	Division of Forestry reorganization process begins. Division divided into two branches for Fire Protection and Forestry
		2022	Division of Forestry is renamed "Division of Forestry & Fire Protection" to highlight the Division's evolved responsibilities

Alaska Interagency Fire Management Plan



Fire Management Options

- **Critical**

The highest priority for suppression actions. Wildland Urban Interface (WUI) and other areas where an immediate threat to human life, primary residences and designated National Historic Landmarks

- **Full**

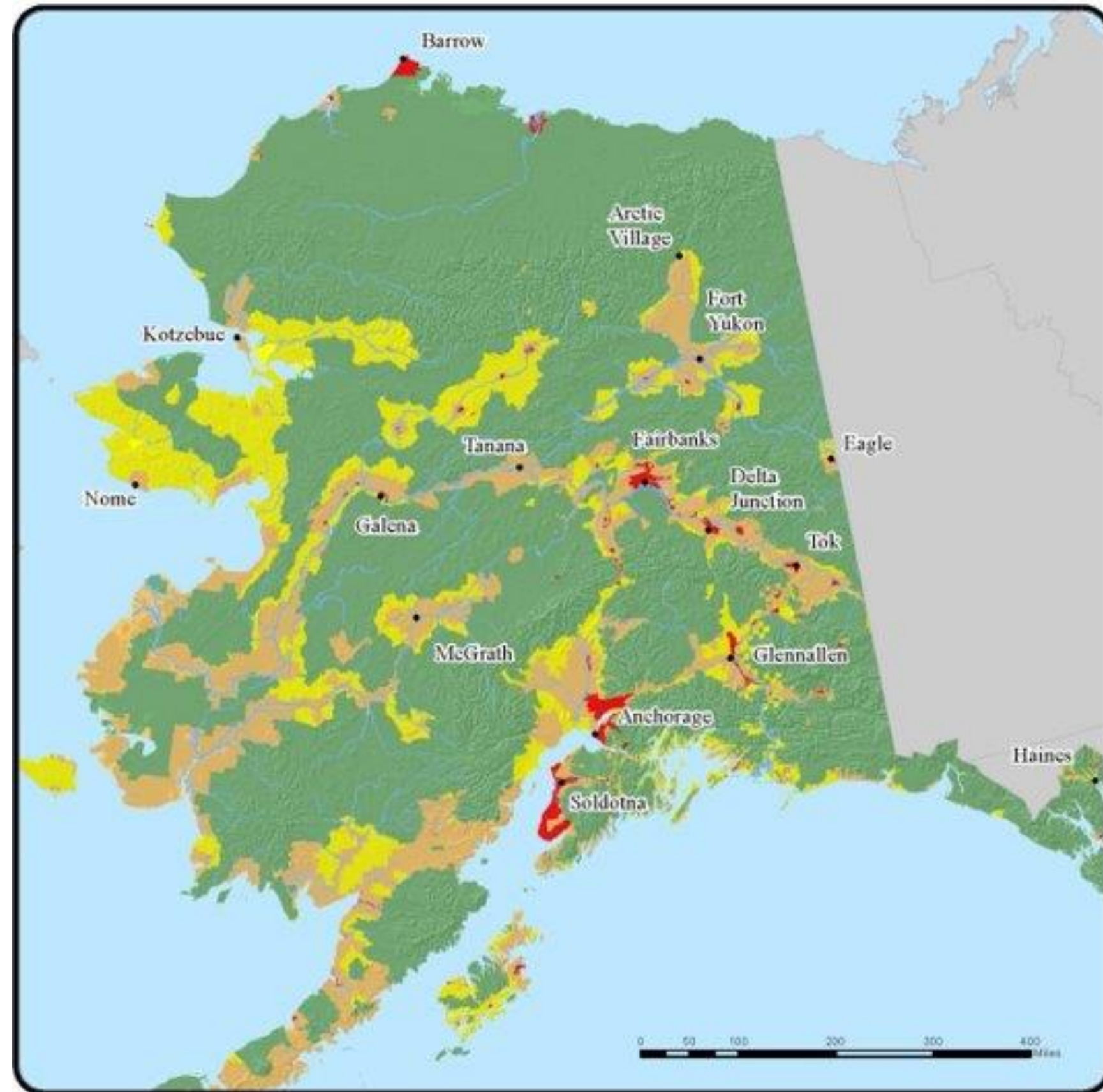
High priority but below critical. For cultural and paleontological sites, administrative sites and cabins, and high-value natural resource

- **Modified**

Intended to balance acres burned with suppression costs and to accomplish land and resource management objectives when conditions are favorable

- **Limited**

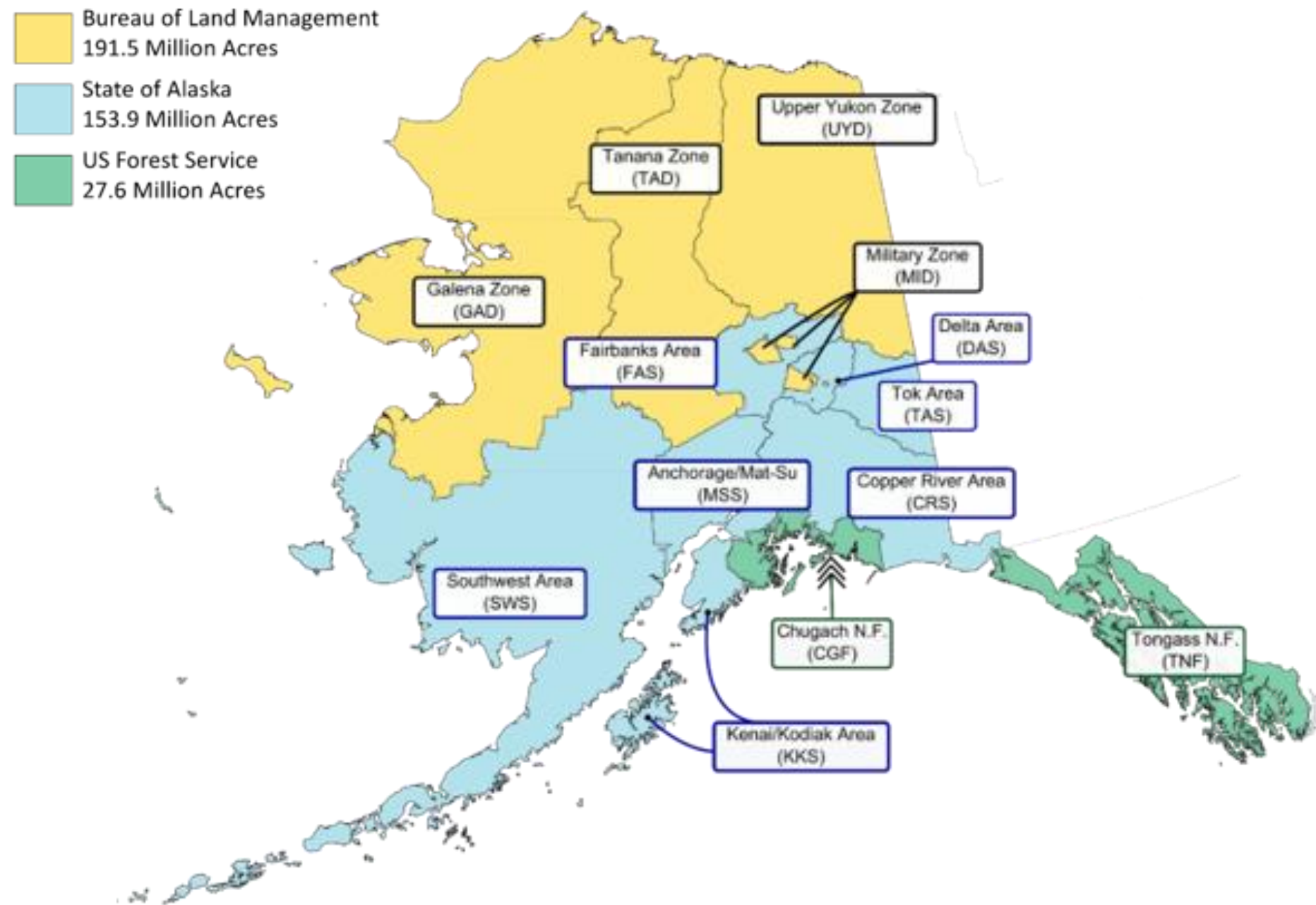
The lowest priority for fire-related resource assignments. Designed for broad, landscape-scale areas where fire best performs its ecological role



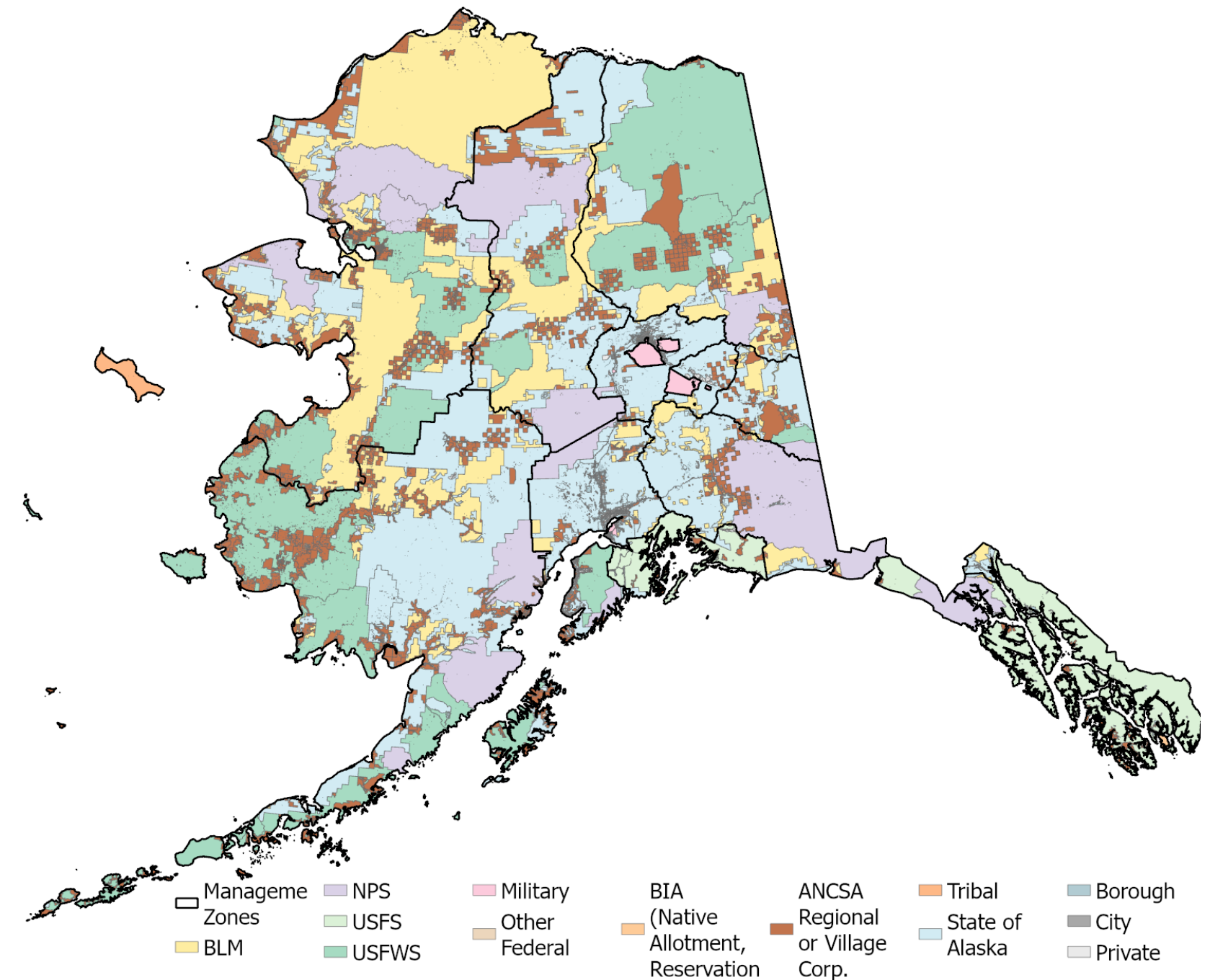


Interagency Cooperation

Protection Agencies



Jurisdictional Agencies

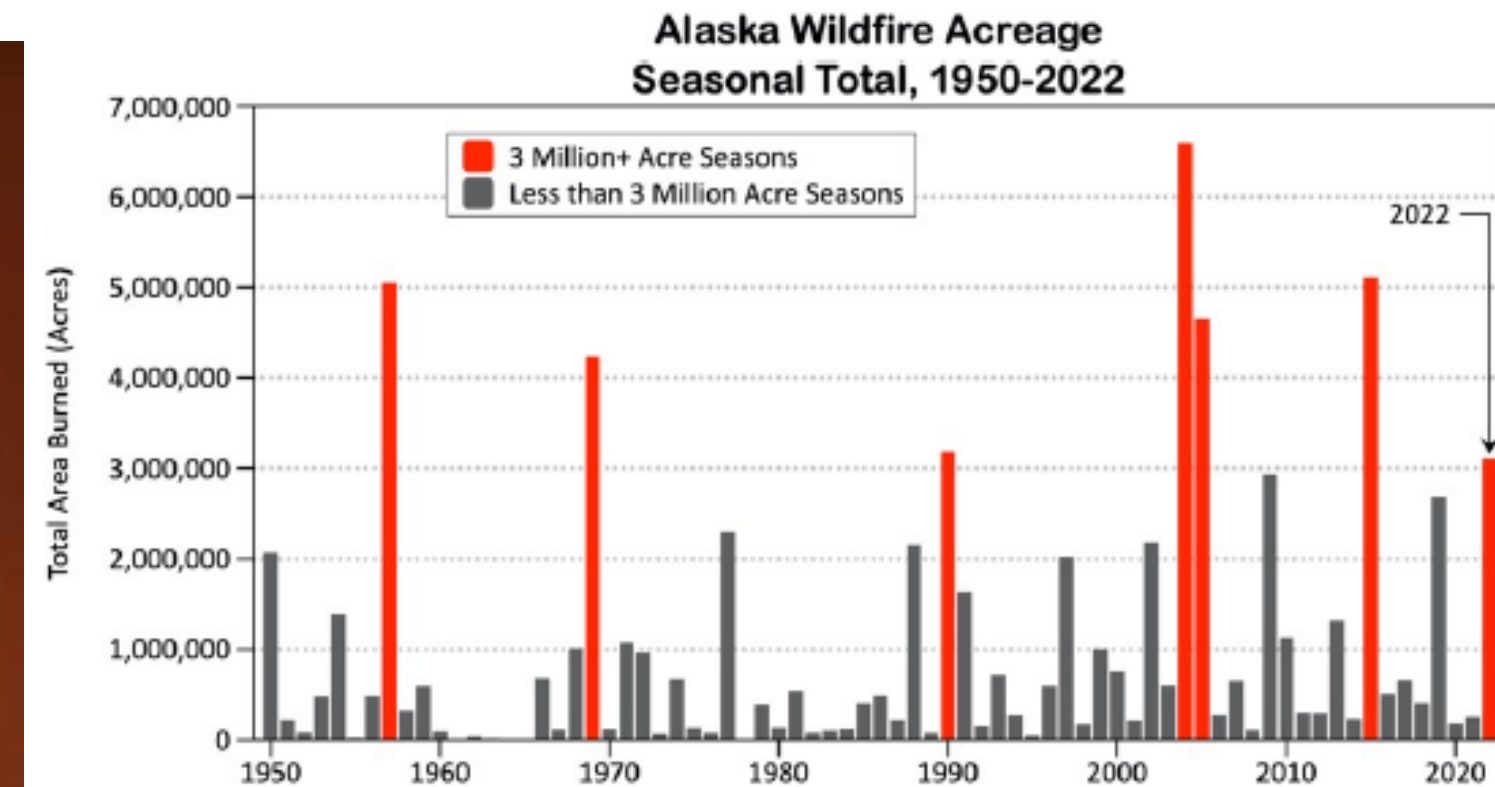


DOF protects 154 million acres – includes almost all the roadside areas of the state (where most Alaskans live)

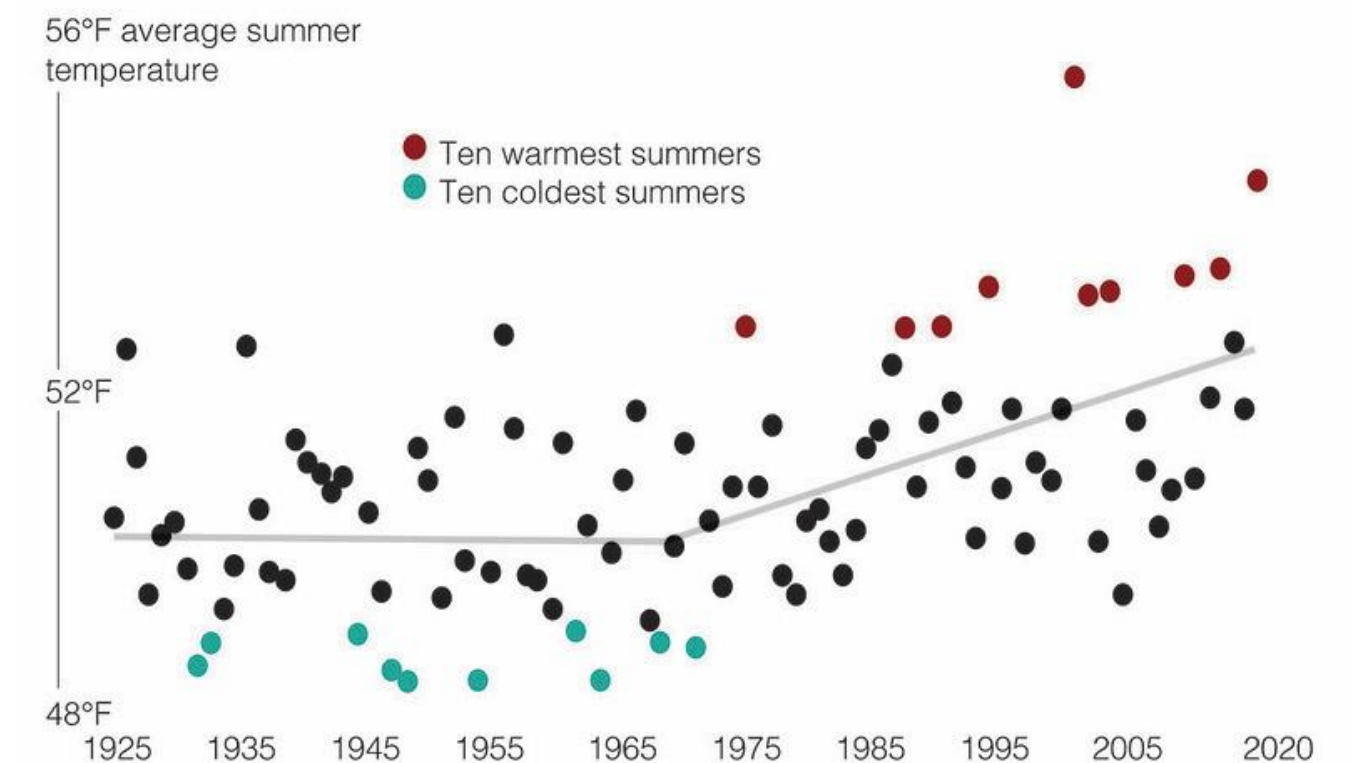
Alaska's Changing Wildfire Environment



Swan Lake Fire, Sterling Highway 2019

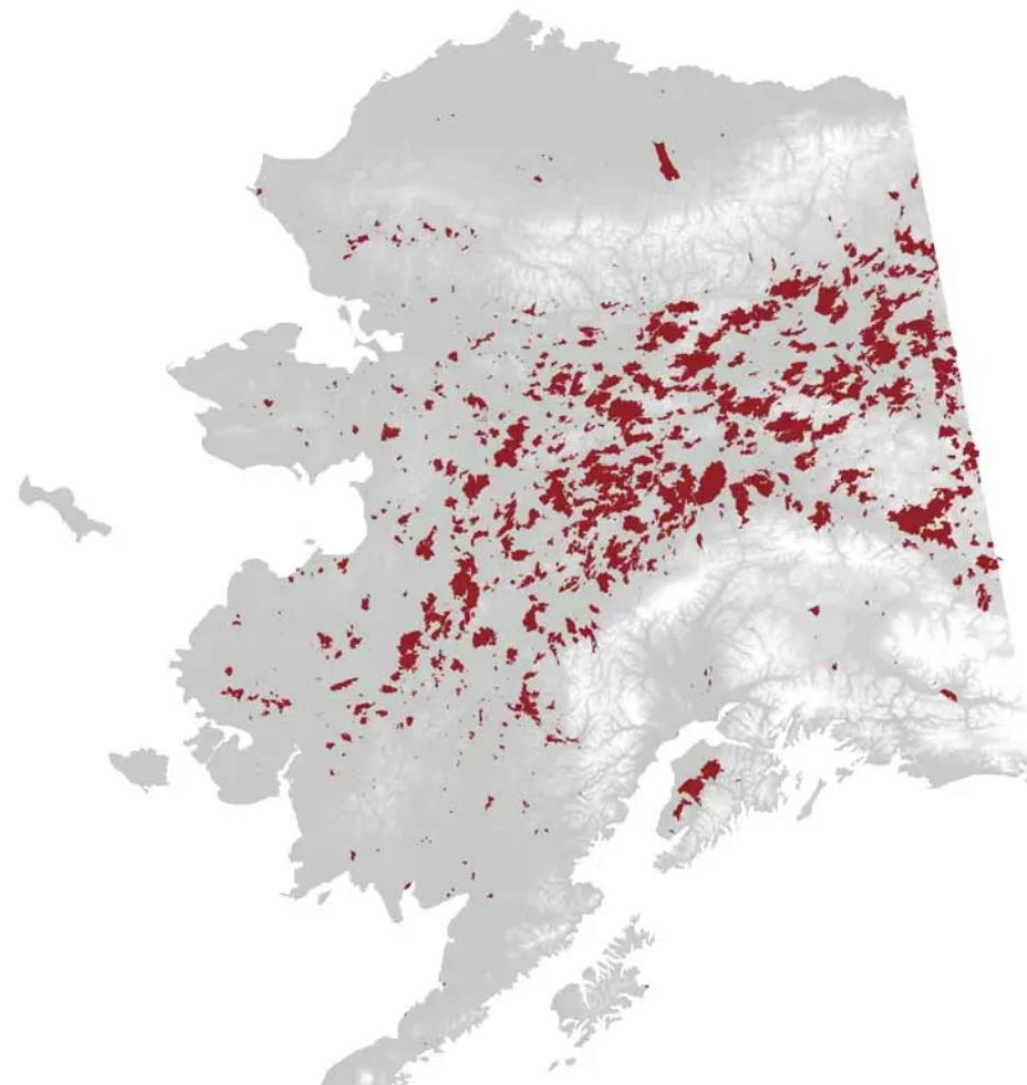


Increasing summer temperature in Alaska

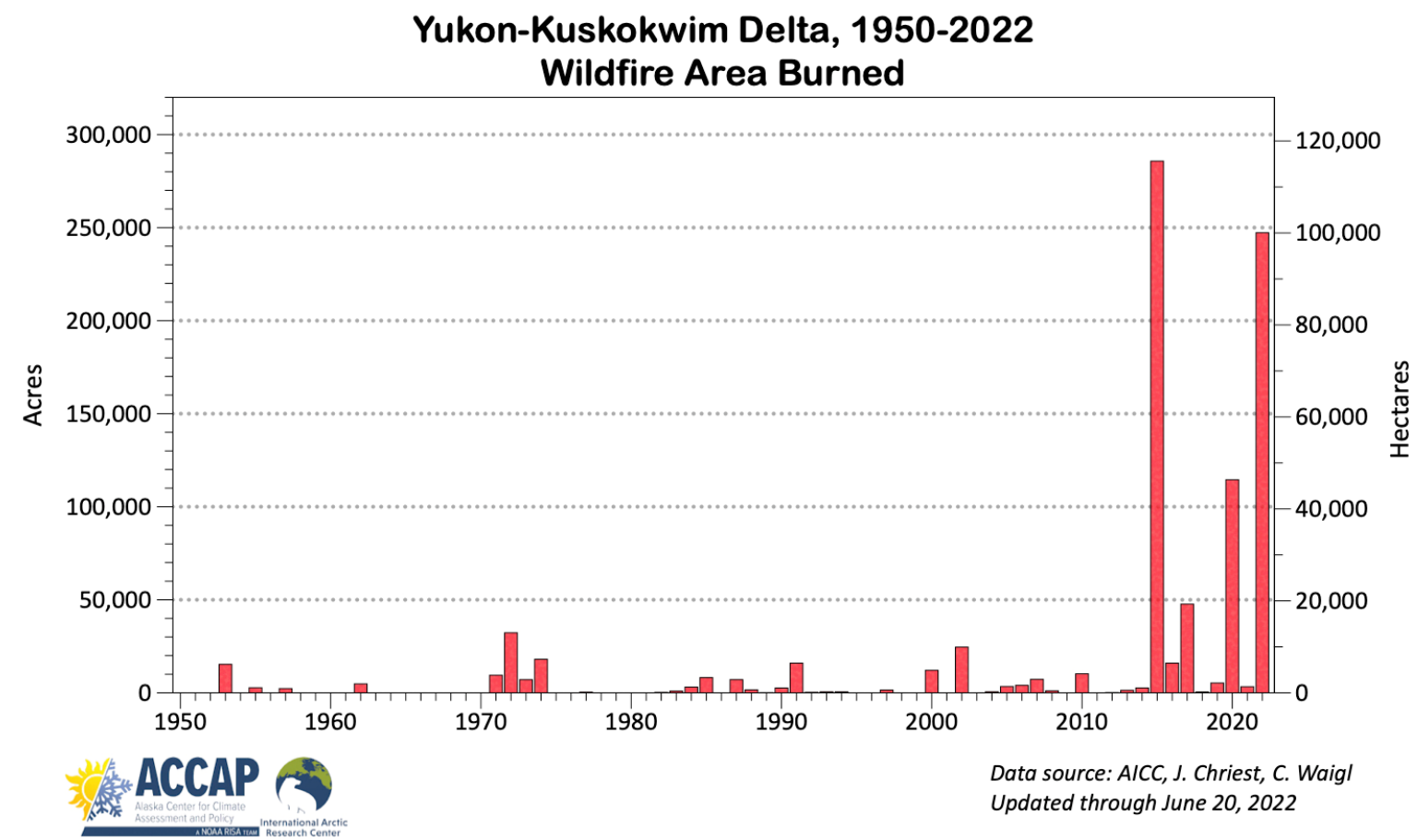


Credit: Thoman, R. (2020). Summer's getting hotter. *Alaska's Changing Wildfire Environment*, Grabinski, Z. and H. R. McFarland, www.frames.gov/afsc/acwe.
Data source: NOAA/National Snow and Ice Data Center & National Weather Service

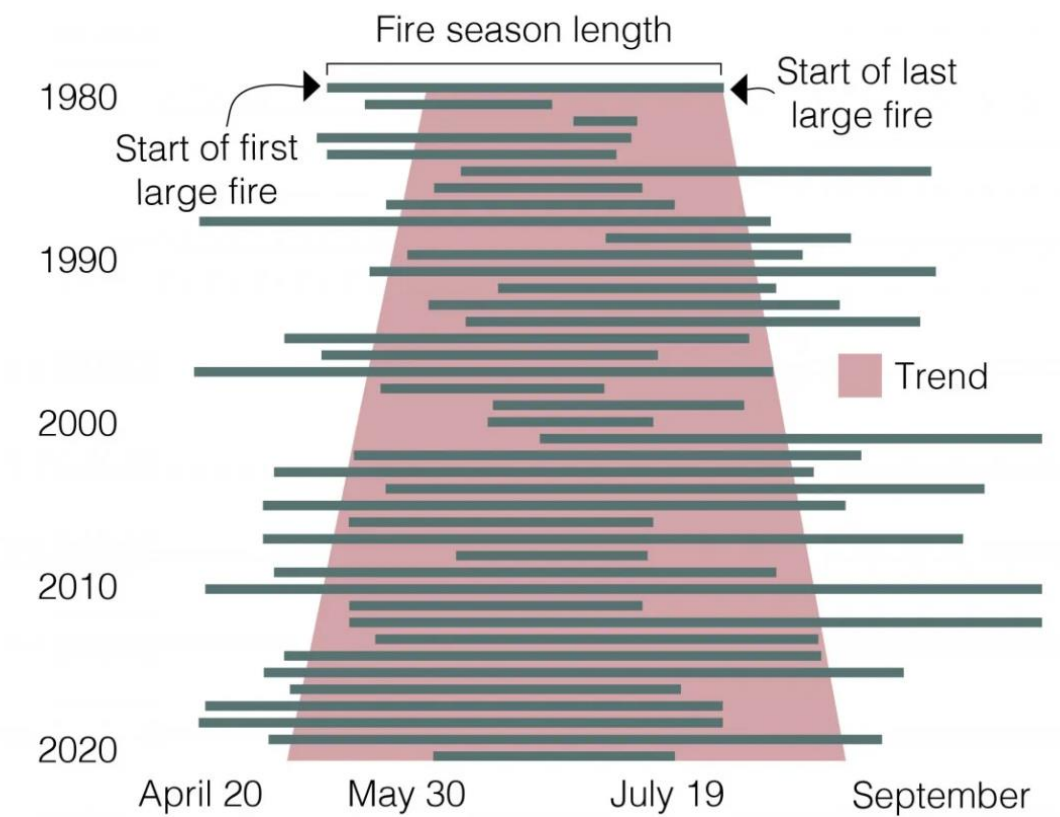
Alaska's Changing Wildfire Environment



From 2001–2020, wildfire in Alaska burned 31.4 million acres. Over 2.5 times more acres burned than during the previous two decades.



Alaska's lengthening fire season



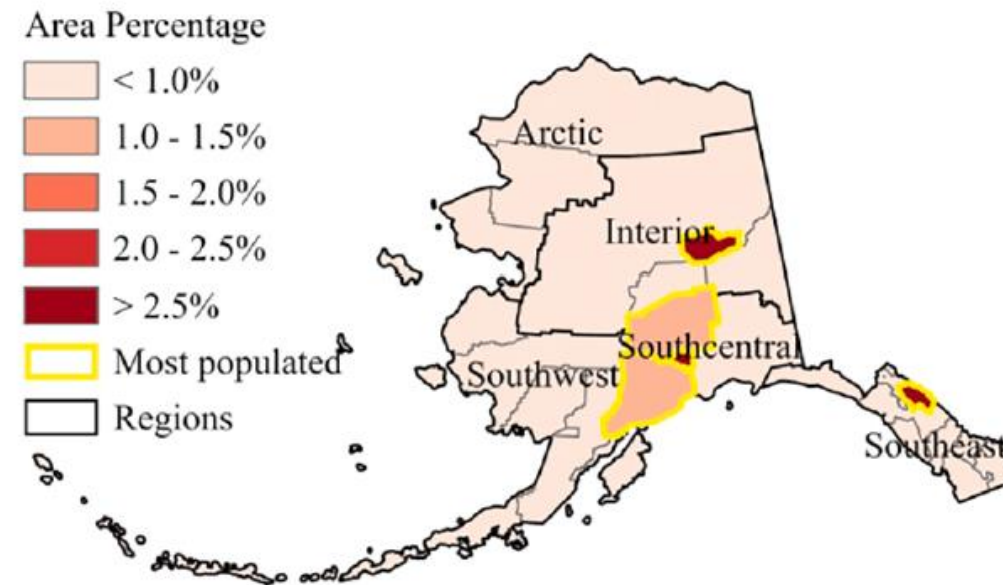
Credit: Grabinski, Z. (2020). Longer fire season. *Alaska's Changing Wildfire Environment*, Grabinski, Z. and H. R. McFarland, www.frames.gov/afsc/acwe.
Data source: Alaska Interagency Coordination Center



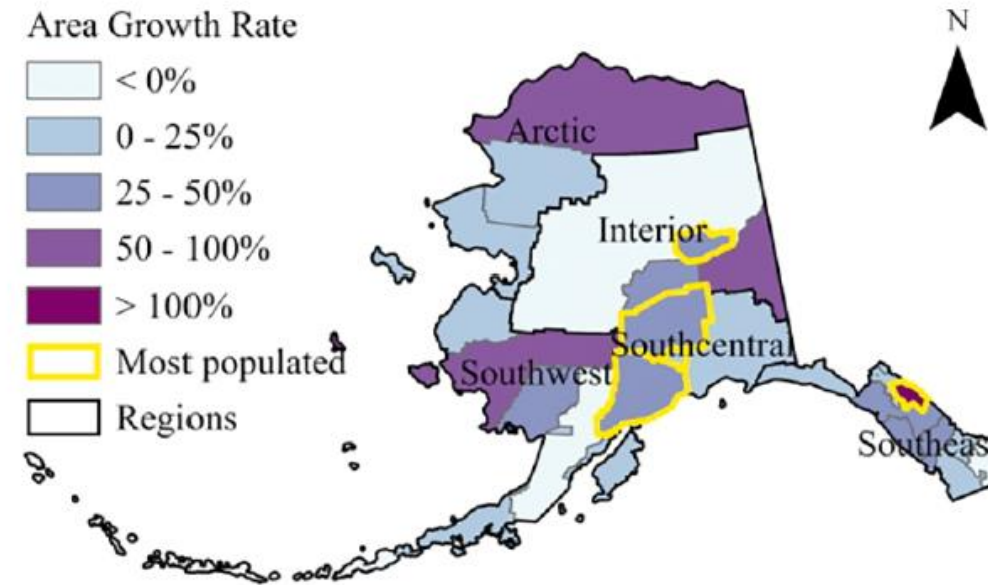


Alaska's Growing Wildland Urban Interface

Proportion of borough in 2010



Growth rates compared to 2000



73.5%

Alaska's total housing units contained in WUI zones

85%

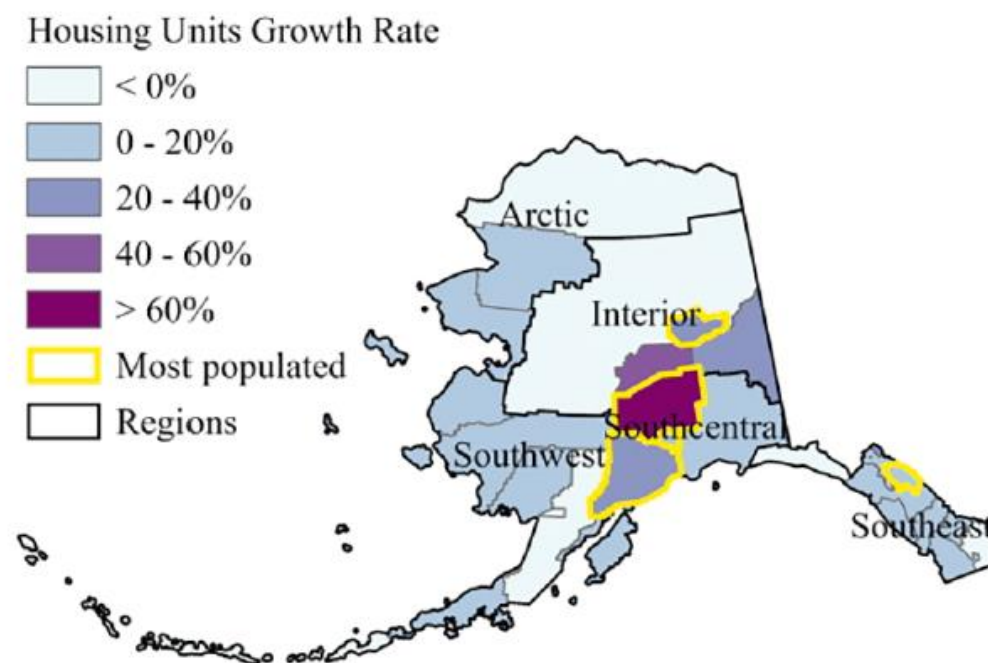
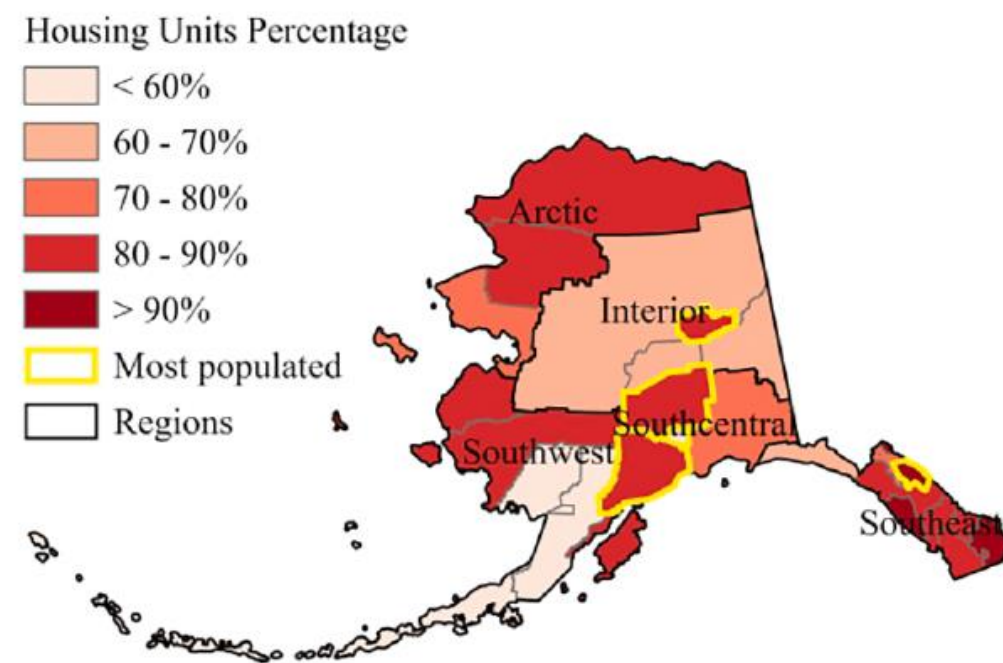
Newly added housing units were found in the WUI

16.4%

Alaska's population increase from 2000 (627,963) to 2020 (731,158)

Top 5

Alaska ranks 5th in the country for state with highest percentage of housing units in WUI



0 250 500 1,000 Kilometers



Evolving Responsibilities



Most destructive wildfire in Alaska History
454 structures Destroyed
1590 properties evacuated
Presidential Disaster Declaration

Millers Reach Fire, Big Lake 1996



55 residences lost, 44 damaged
800 residents evacuated
\$200 Million in recovery costs

Sockeye Fire, Willow 2015



55 primary structures lost
84 secondary structures lost
1028 properties evacuated
\$200 Million in recovery

McKinley Fire, Willow 2019



Aggie Creek Fire, Fairbanks 2015

Increased Fire Management Costs



Alaska Wildfire 2022 Statistics



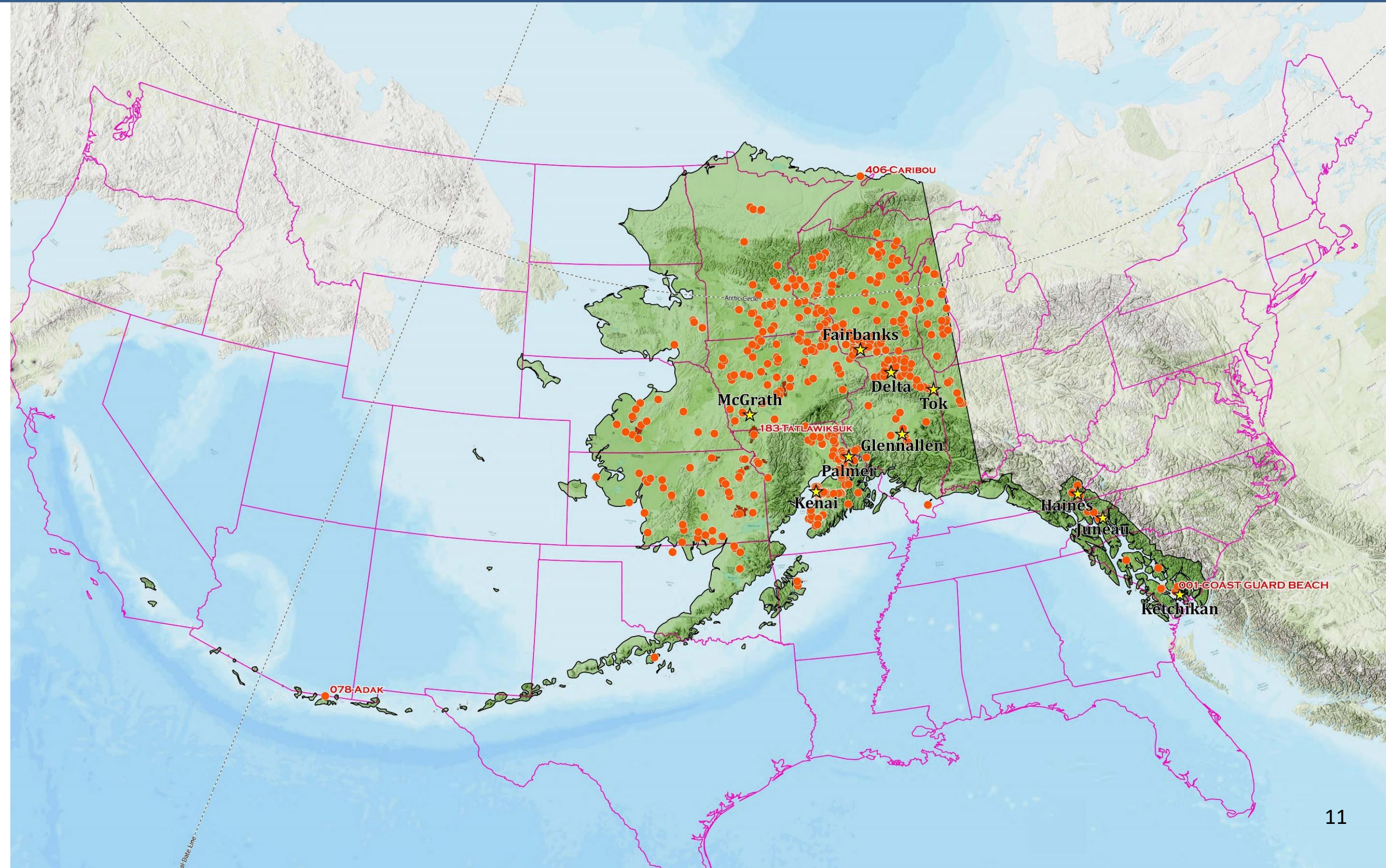
- 3.1 million acres burned
- Highest acreage burned in 2022 nationwide
- 7th largest since 1950
- Short but intense: 95% area burned in six weeks
- Unprecedented large wildfires in southwest Alaska
- Largest tundra ecosystem wildfires since 2007



2022 Fire Season Statistics



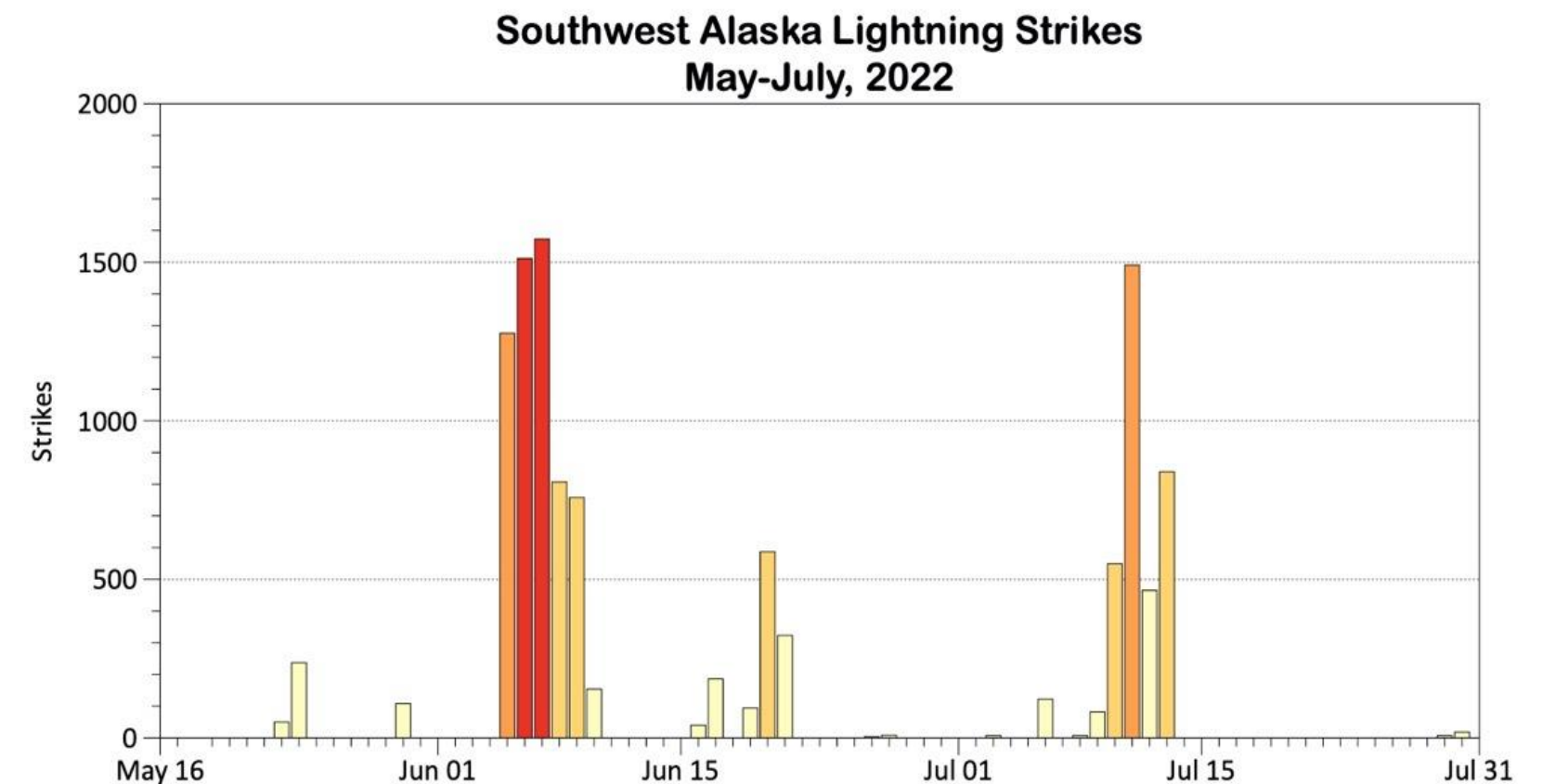
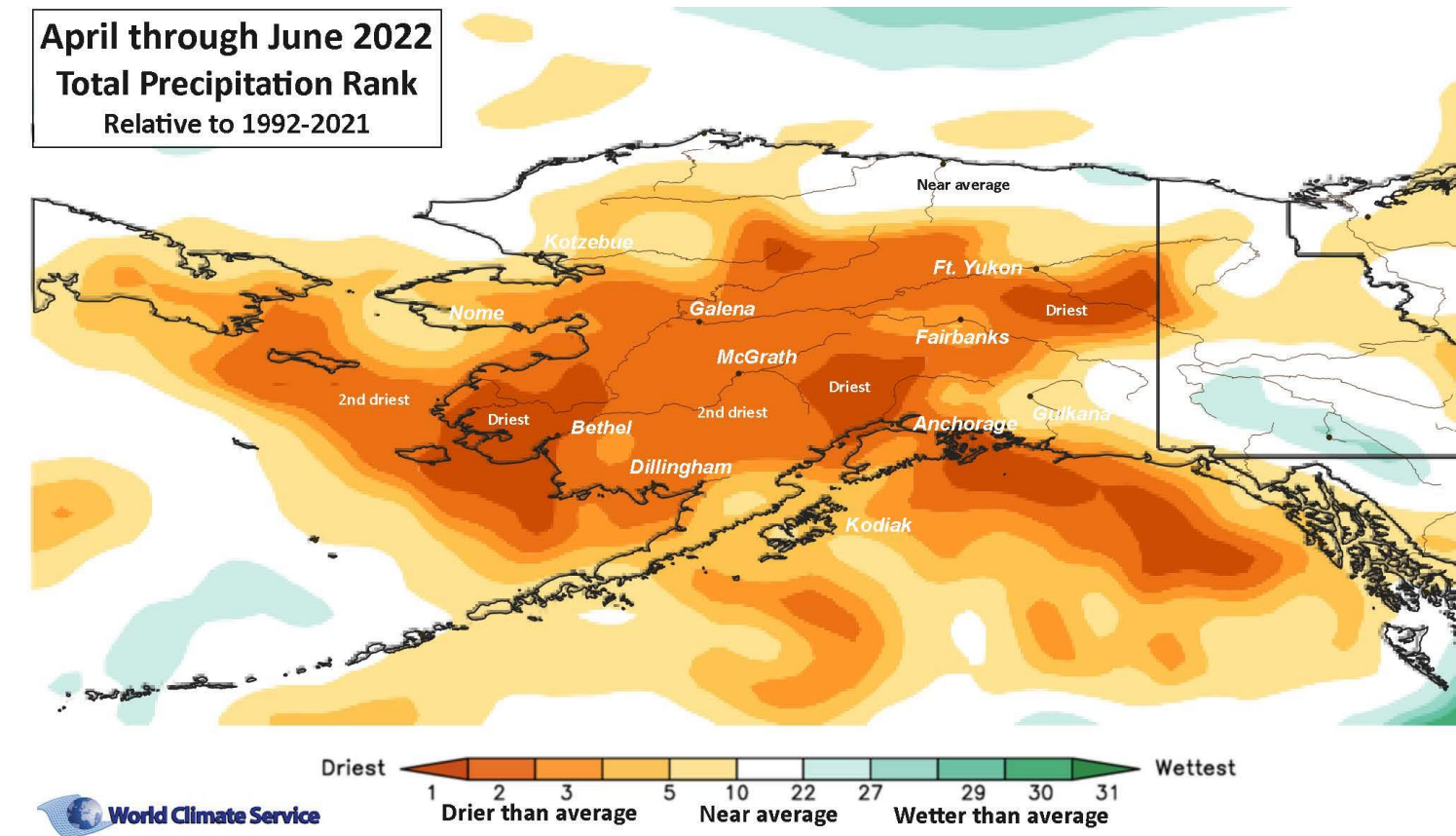
- 576 fires: 3.1 Million acres
- 270 human-caused: 11,712 acres
- 277 lightning-caused: 3,053,927 acres
- Largest Fire: Tatalawiksuk, 233,007 acres
- Distance from Fire 001 to Fire 078: 1,800 Miles
- Distance from Fire 001 to Fire 406: 1100 Miles



Unusual Start to 2022 Wildfire Season



- Record lack of precipitation across the state combined with early season lightning bust in SW Alaska
- Extreme early season growth (highest in 60 years)
- 1.2 million acres burned in SW Alaska, more than doubling acreage burned in the region since the 1950s in a single year
- Kwethluk fire: Largest April fire in Alaska's history
- Early fires in unusual places
 - Round Island (Togiak Bay)
 - Contact Creek (S. King Salmon)



Multiple Fires and Complexes within DNR Jurisdiction

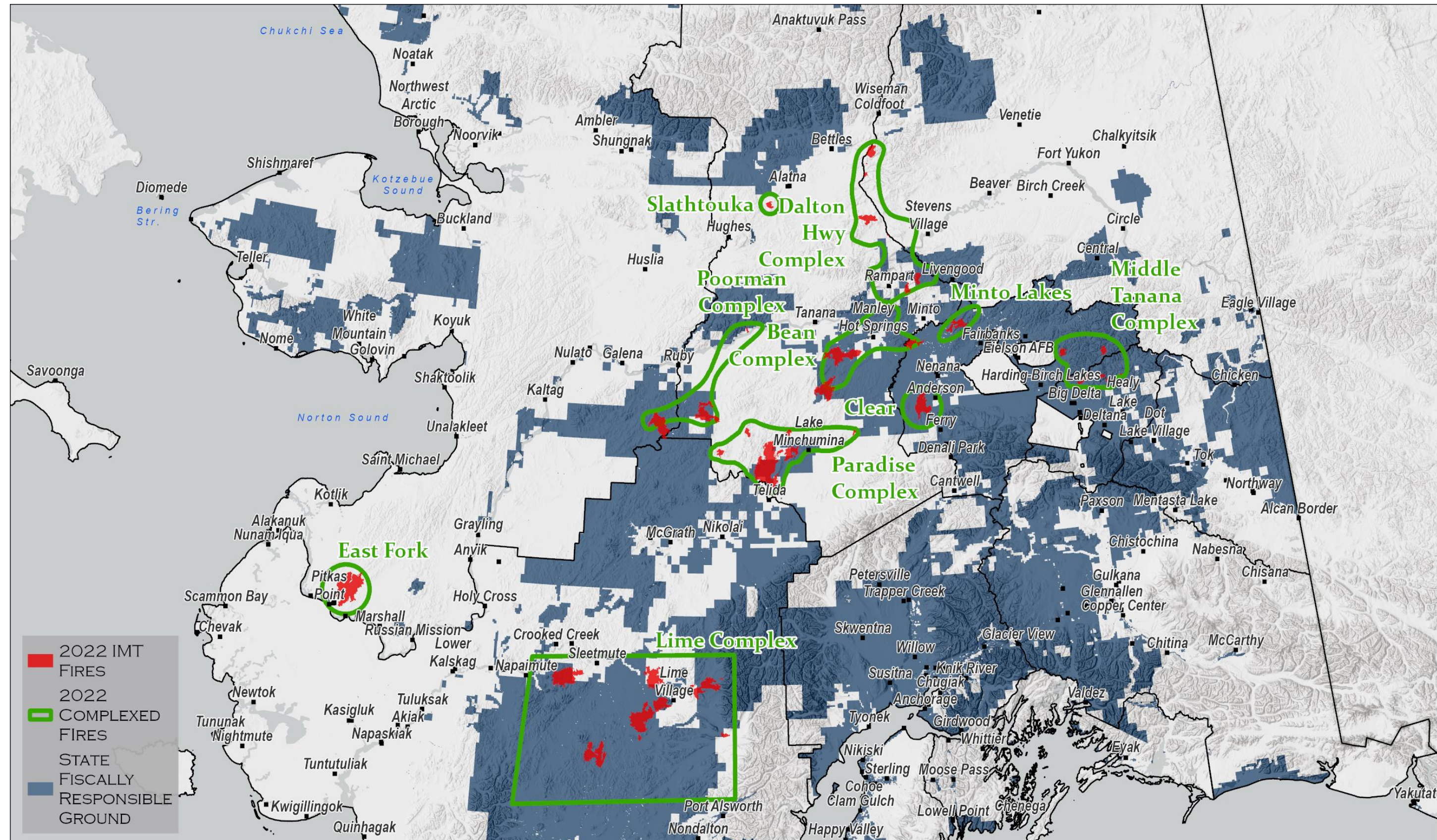


2022 Complexes

- Lime Complex
- Paradise Complex
- Middle Tanana Complex
- Poorman Complex
- Slathtouka Complex
- Dalton Highway Complex
- Bean Complex

2022 Large Staffed Fires

- Minto Lakes
- Clear
- East Fork





Increased Fire Management Costs to the State

2022 calendar year estimated fire suppression costs
~\$120,000,000

February 2022: FY2022 Emergency Fire Declaration for closing out fire season 2021 and starting fire season 2022

\$20,000,000

January 2022: FY2022 annual allocation remaining at start of fire season 2022

\$3,359,000

June 2022: FY2022 Emergency Fire Declaration for 2022 fire season

\$25,000,000

July 2022: FY2023 Annual Allocation to Fire Activity GF

\$13,641,000

September 2022: FY2023 Emergency Fire Declaration for 2022 fire season

\$50,000,000

February 2023: FY2023 Emergency Fire Declaration for 2022 fire season

\$8,000,000

\$74 mil

Alaska spends an average of \$74 million on wildland fire suppression per year

3,000+

Lower-48 fire fighters imported to Alaska during fire season

109

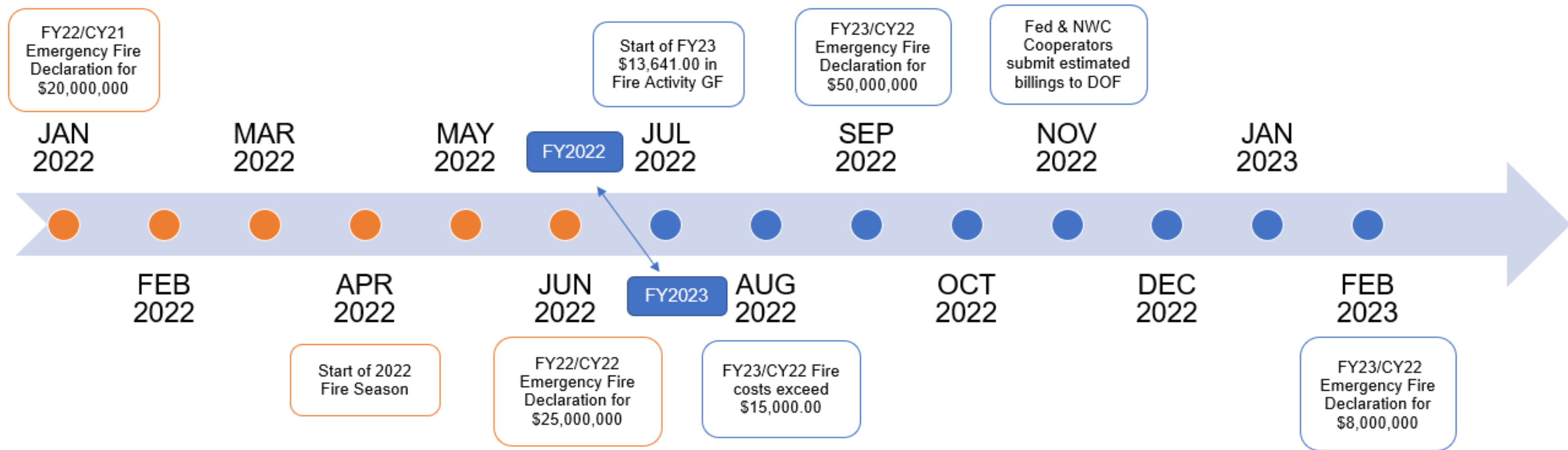
Out of state aircraft used on suppression efforts

27

Imported Incident Management Teams to manage Alaska fires according to DOF directions



2022 Fire Season Financial Timeline



NWC: Northwest Compact (Canadian and Northwest US State resources)

Fire Program Budget Components



Fire Suppression Preparedness	Fire Suppression Activity
General Funds	
Personal Services: non fire	Personal Services: in-state fire suppression
Office Space/Airport Leases	Fire Engine Fleet: in-state
Utilities	Crew Vehicles: in-state
Fire Engine Fleet: while not on fire	Aircraft Usage: flight time on fire
Crew Vehicles: while not on fire	Fuel: aircraft/vehicles/equipment on fire
Mobilization Centers	Equipment: dozers, excavators, boats
Aircraft Fleet: while not on fire	Importing Support: Lower 48/Canadian personnel
Training Academy	Emergency Fire Travel
Match Requirement for Federal Grants	Emergency Fire Fighters
Fire Fighting Equipment & Supplies	Contract Fire Crew
	Fire Logistical Support: camps, dispatchers, trucking
Federal Receipts	
Consolidated Program Grant (CPG): Federal Share	Personal Services: out-of-state fire suppression
Volunteer Fire Assistance Grants (VFA)	Fire Engine Fleet: out-of-state
Fire Prevention Grants	Aircraft Usage: flight time out-of-state
Fire Fighter Training	In-State Fire Suppression of Federal Fires

Costs of Using Lower-48 Resources



The cost to import firefighters and support staff far exceeds using Alaskan resources

- On a fire assignment, a 22-person Alaskan crew costs **\$6,500/day**
- A 22-person Lower 48 crew costs **\$13,500/day** (travel to Alaska, rental vehicles, *per diem*, shipping fire fighting gear, etc.)

Imported resources are not reliably available: Alaska competes with other states

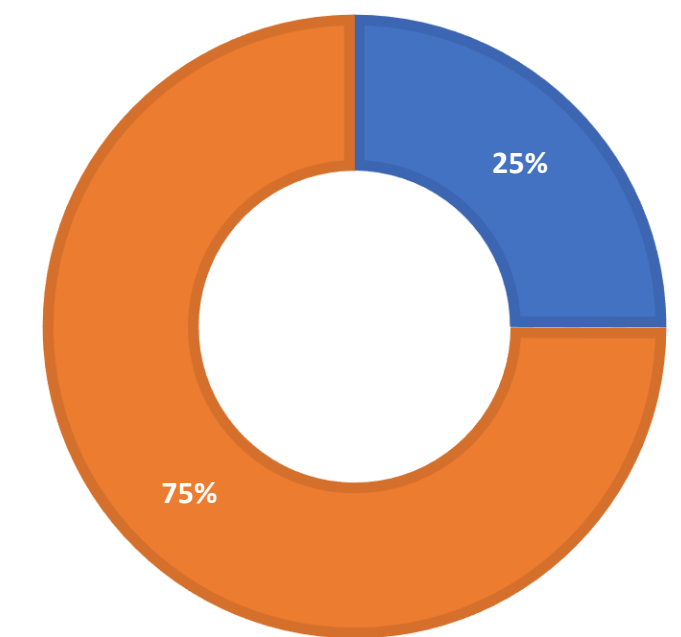
Response times can be as long as 72 hours

- A quick aggressive initial attack with local forces helps limit fire size and duration, reducing costs

Delays result in large fires, resulting in higher costs

In 2022, of the 4,265 personnel used on Alaskan fires, 3,197 of them were from outside Alaska.

2022 PERSONNEL



■ Alaskans

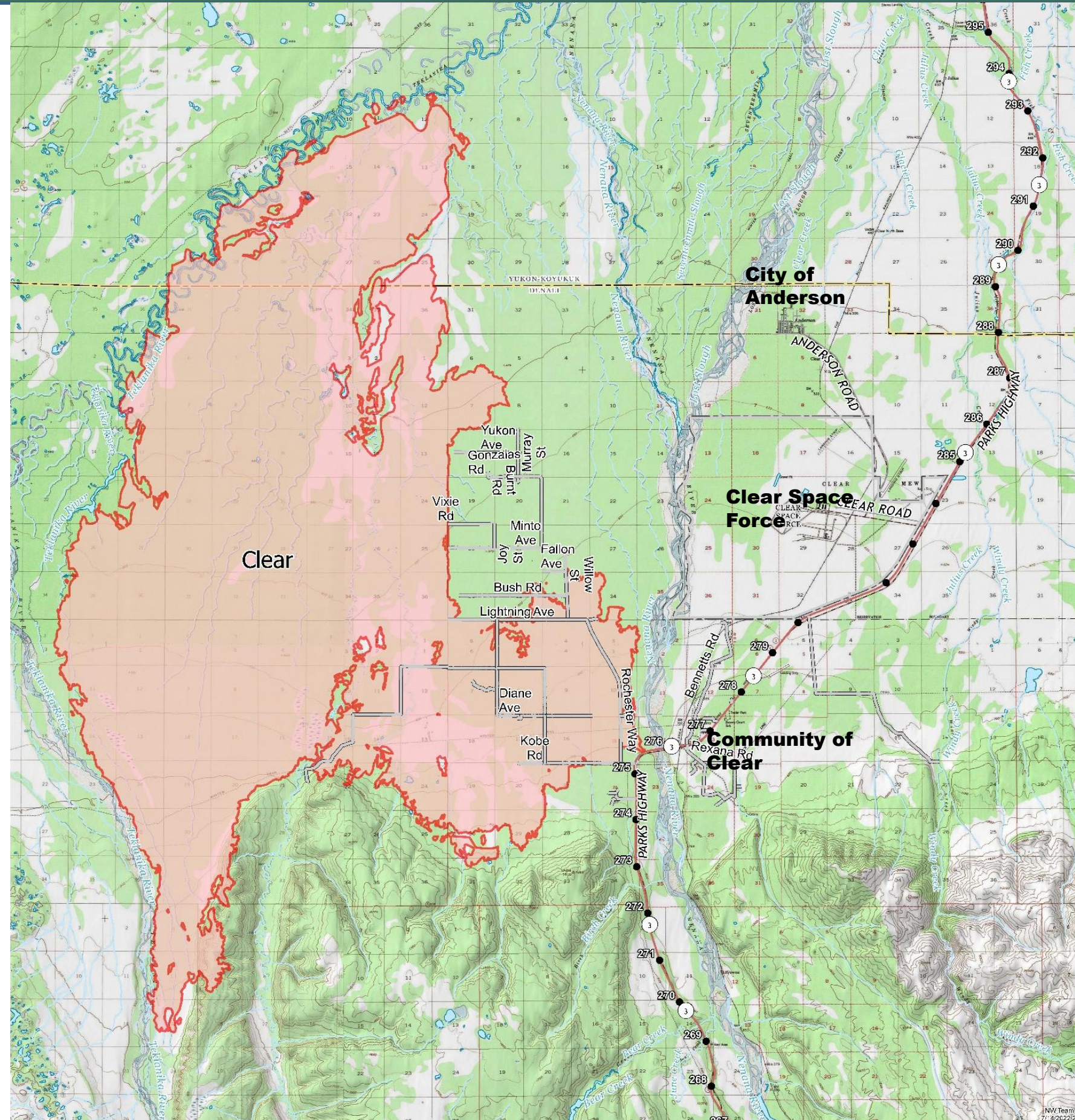
■ L-48

2022 Clear Fire Facts

- 73,284 acres
- Suppression Cost: \$26.9 million
- Impacted 4 subdivisions (>100 residences)
- 2 full-time residences destroyed
- 50+ structures burned
- Federal Emergency Management Agency (FEMA) Fire Management Assistance Grant (FMAG) Declaration

Values at Risk

- City of Clear
- 4 rural subdivisions
- Clear Space Force Station
- Parks Highway Corridor
- Power and communication infrastructure

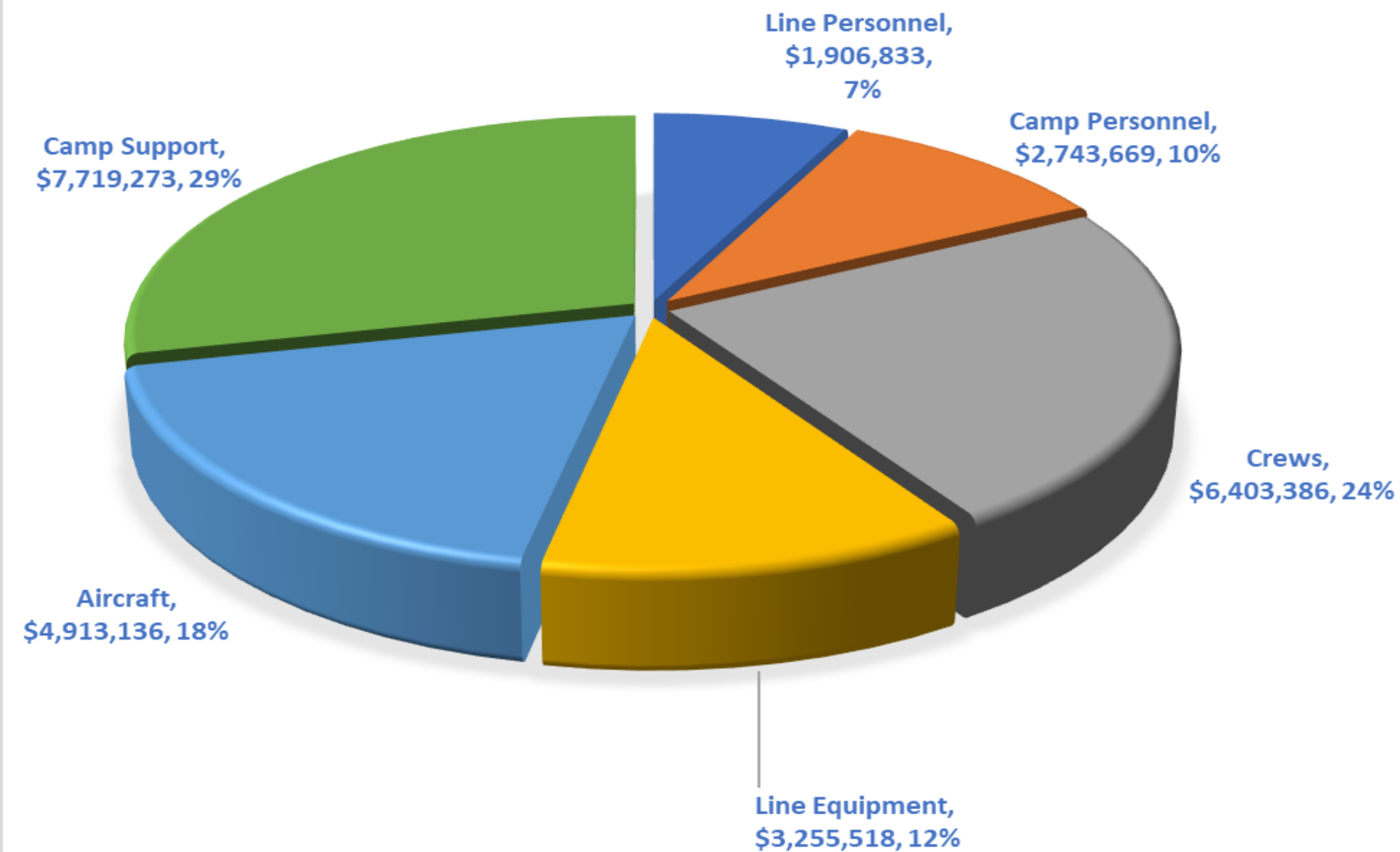




Fire Cost Categories

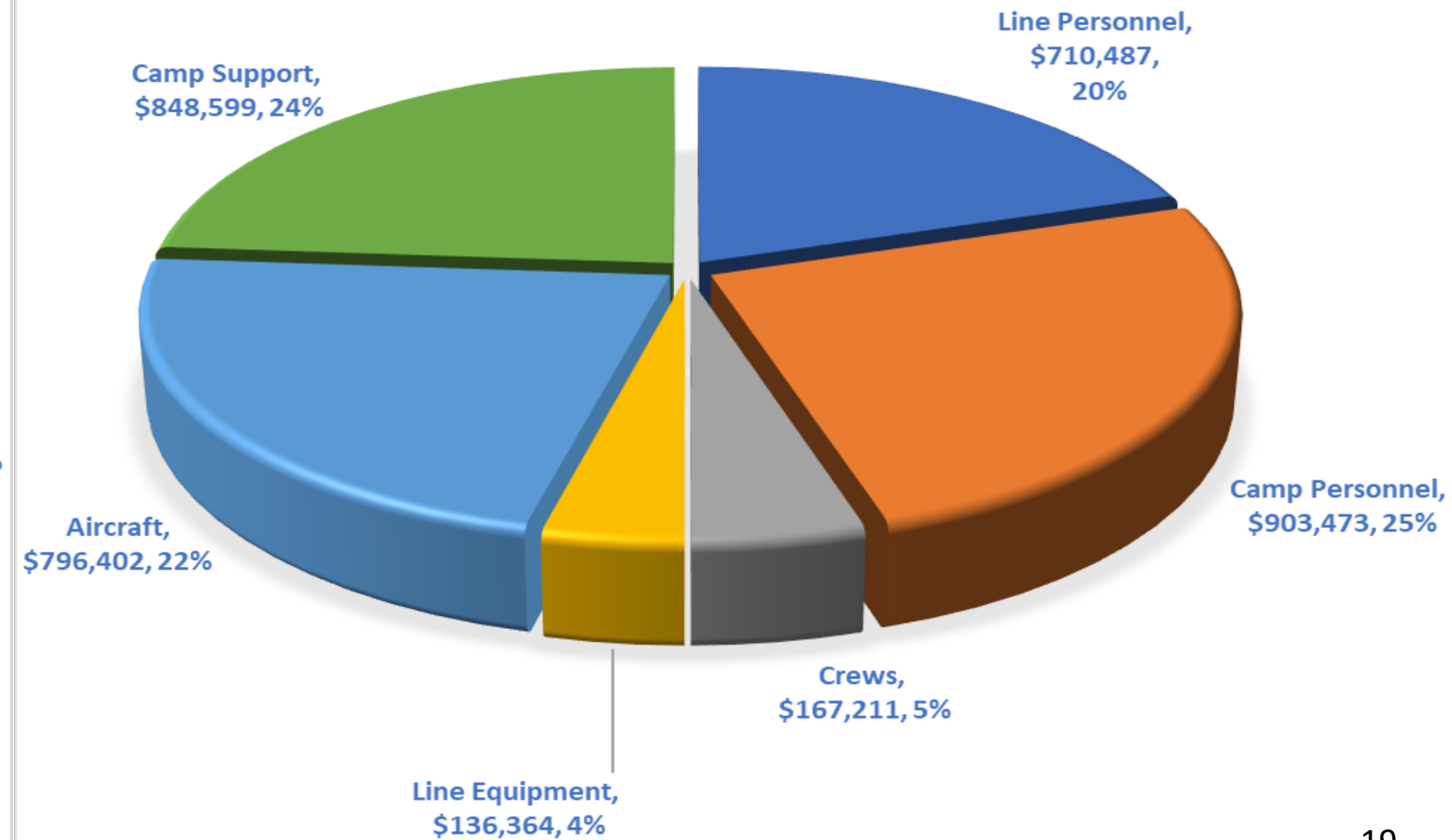
CLEAR FIRE 2022

TOTAL ESTIMATED COST \$26,941,815



MIDDLE TANANA COMPLEX 2022

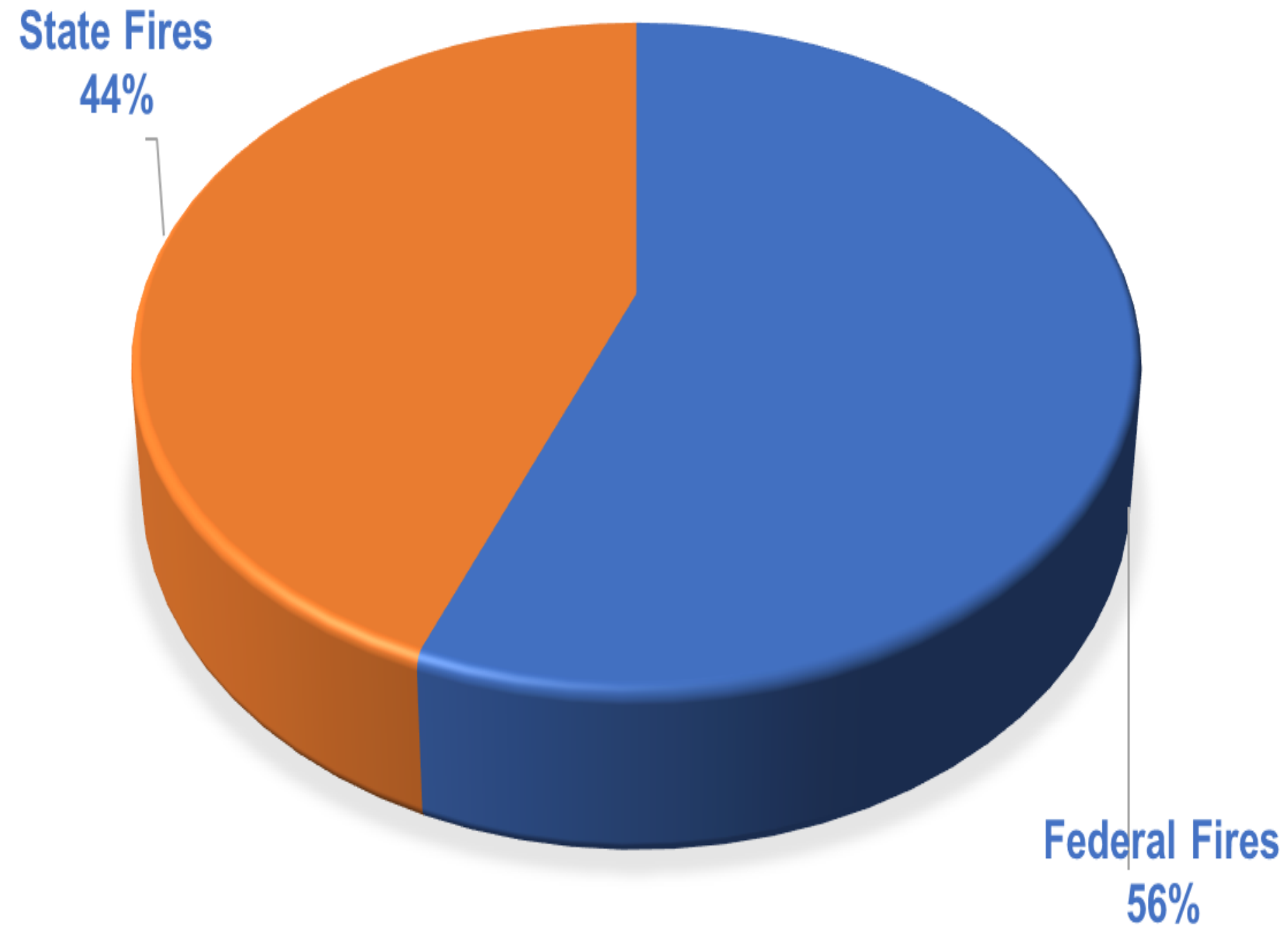
TOTAL ESTIMATED COST \$3,562,536



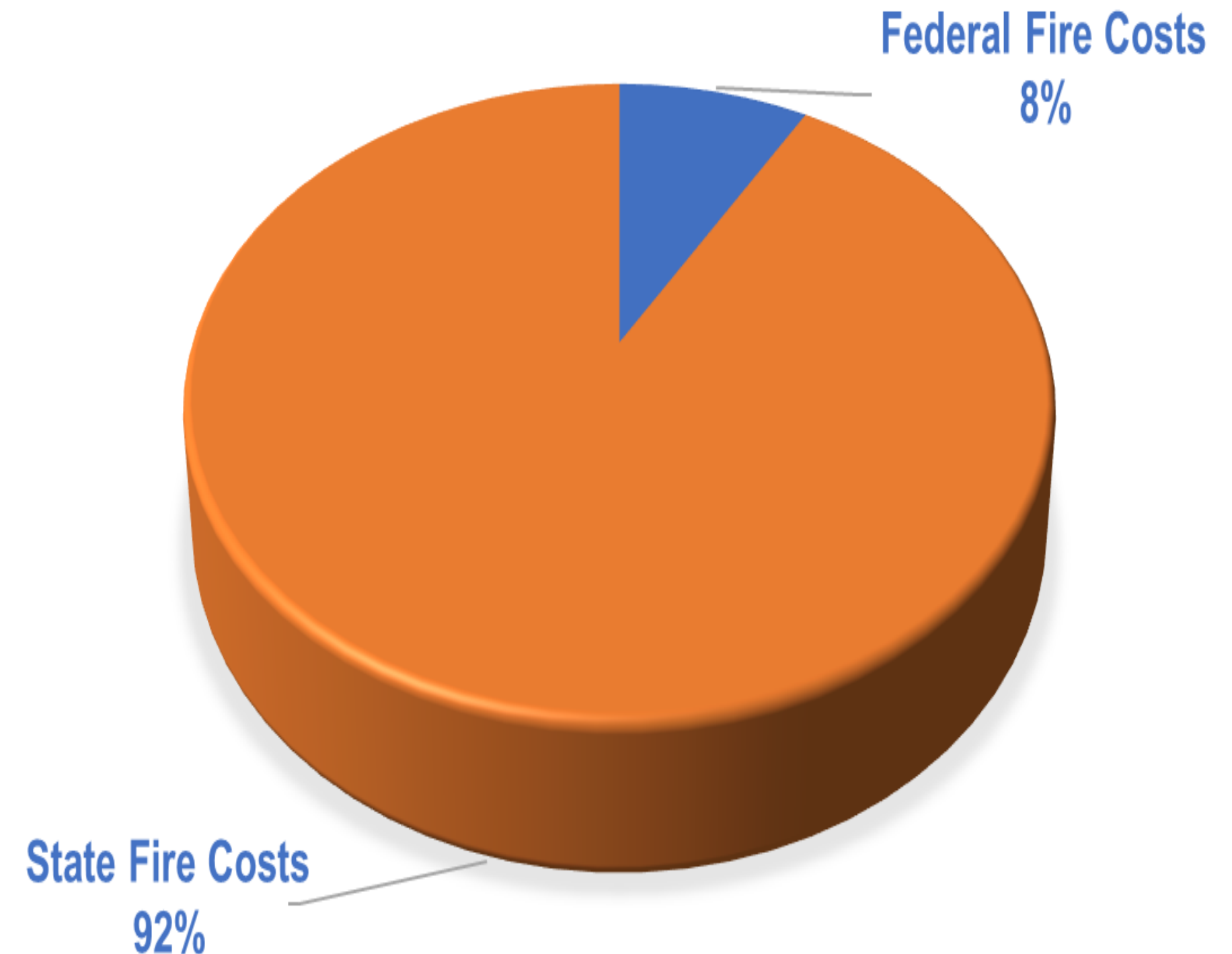
Federal vs. State Fiscal Responsibility



5-YEAR AVERAGE FISCAL RESPONSIBILITY



2022 FIRE SEASON FISCAL RESPONSIBILITY



Fire Program Priorities



Building To Preparedness Level 3

- Recruitment and Retention
- Workforce Development

Future Infrastructure Needs

- Fairbanks Fire Center
- Fairbanks Tanker Base
- Eagle River Crew Facility
- McGrath Station

Reducing Fire Costs to State

- Reorganization
- Increase Initial Attack Capabilities
- Preventing Human Caused Fires
- Fuels Reduction
- Fire Plan Updates



Questions



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