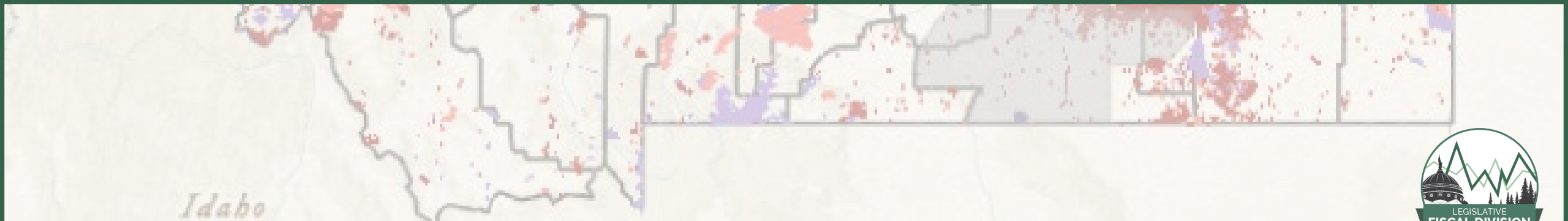


LEGISLATIVE FISCAL DIVISION

Wildfire Cost Data Tool Updates, Improvements, and Future Direction

ALICE HECHT, LFD



Idaho

PRESENTED TO THE MODERNIZATION AND RISK ANALYSIS COMMITTEE

MAY 14, 2026



Plan of Presentation

- 1 MARA Wildfire Timeline; Why Study Wildfire?
- 2 Summary of Preliminary Observations from Updated Model
- 3 Background Information – State & Federal Responsibility, the “Wildfire Hazard Potential” Product, & the Montana Fire Suppression Fund
- 4 5 Preliminary Observations
- 5 Next Steps & Feedback

Why Study Wildfires?

MARA Wildfire Timeline

TIMELINE

I

Spring 2024

Project Begins: gather data, meet with experts, research, data work

II

October 2024

Version 1 Model presented to MARA

Formed a Foundational Dataset for Questions & Further Analysis

III

October 2025

Fire model updated and prototype of fire specific costs presented to MARA

Added in Cost Analysis, But Still Very Slow to Load

IV

May 2026

Updated model, improved load speed and accessibility, preliminary new data

Faster Loading Version with More Detailed Cost Analysis

V

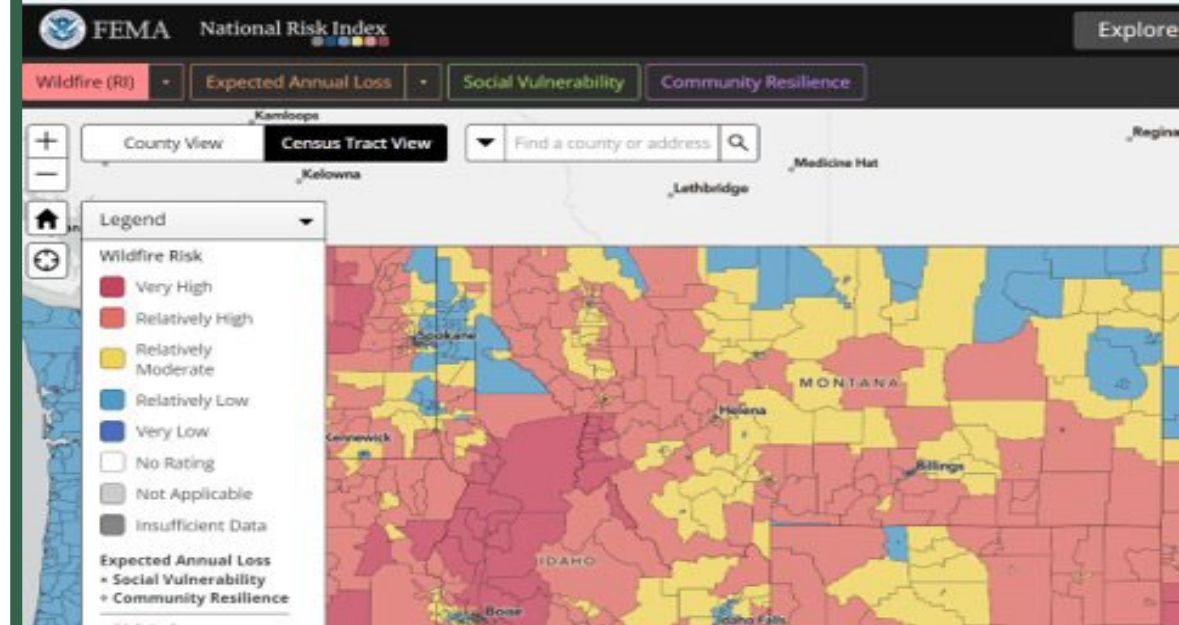
Next Steps

Contingent on Legislative Feedback & Needs
Updated Model Currently in Refinement and external validation phase.

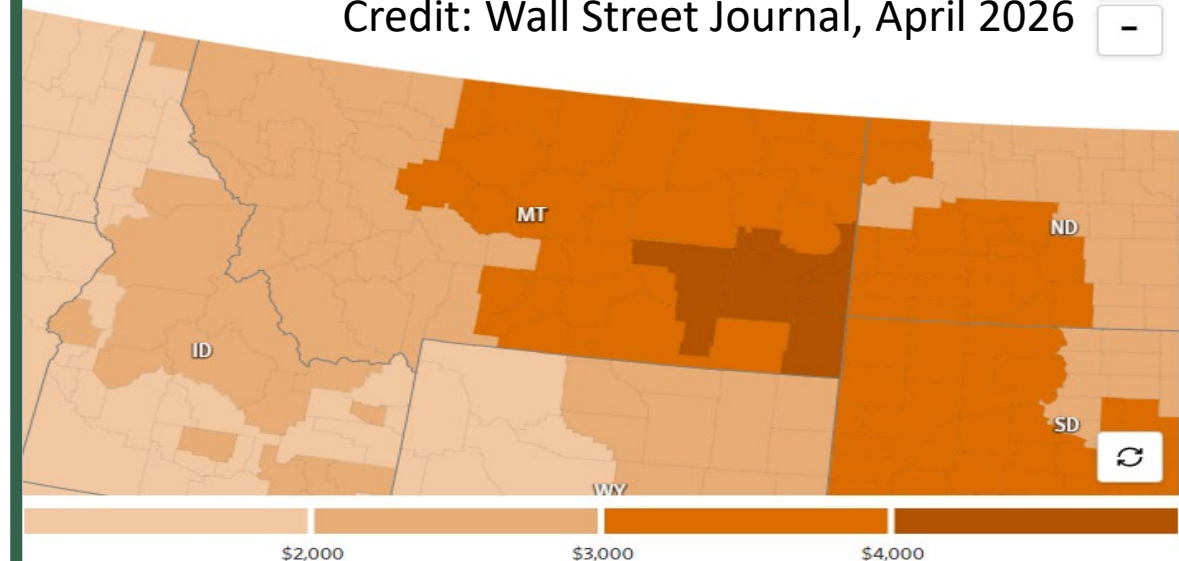
WHY STUDY WILDFIRE?

- Wildfire Costs Continue to be a Large & Unpredictable Financial Obligation
- Montana is Ranked as High Risk in Many National Tools
- Track Costs and Trends Over Time as Policy & Technology Changes
- Increasing Insurance Costs for State's Residents
- Offer a Statewide Perspective for Lawmakers
- **Identify State Financial Pressures Related to Wildfires: Past, Present & Future**

Montana's threat of catastrophic property destruction by wildfires ranks No. 2 in the nation



Credit: Wall Street Journal, April 2026



HB 70 (2025 Session)

Section 1. Study of state fire suppression issues, methods, and costs. (1) The environmental quality council provided for in 5-16-101 shall conduct a comprehensive fire suppression study.

(2) The study must include an investigation of:

(a) firefighting operations in Montana by the state and federal governments, including operations on tribal land and private land, and the management policies affecting the success of those operations;

(b) the efficient use of fire suppression resources, including equipment and firefighters;

(c) the impact of operations on private land and the effective use of private resources to fight fires;

and

(d) state and federal forest management and grazing policies and how those policies may potentially affect the number of wildfires, safety risk to firefighters, or fire suppression efforts.

(3) The environmental quality council shall complete the study by September 15, 2026, and report its findings and recommendations, including legislation, to the 70th legislature.

HJ 62 (2025 Session)

impacts of wildfire on property and communities;

(3) the current legal and policy framework regarding wildfire resilience in Montana, specifically:

(a) the barriers to widespread adoption of the state's existing laws and regulations; and

(b) the factors that reduce the efficacy of the existing framework;

(4) solutions that can alleviate risk in Montana, including examples of:

(a) how to incentivize action at the community level, including tax incentives, cost-share programs,

grant programs, and other pathways to ease property owners' burden; and

(b) effective statewide regulation of building materials, development patterns, landscaping

guidelines, and vegetation management in the wildland-urban interface, including:

(i) how the state can allow local jurisdictions to adopt more robust codes and standards than the

state baseline that will allow high-hazard communities to protect homes, businesses, and their economies while

not placing an onerous burden on lower-hazard communities;

(ii) the role of state agencies in effectively acting as liaisons and experts to municipal government

in enacting and enforcing statewide wildfire resilience codes;

(iii) the development of hazard and risk maps that can inform property owners and local

governments where areas of higher or lower hazard exist; and

(iv) solutions that effectively balance oversight and enforcement with on-the-ground conditions and

flexibility for property owners.

Summary of Preliminary Observations

From the Updated Wildfire Model

5 Preliminary Observations from Updated Model

1 History of Wildfires in Montana

- ◇ Annual acres burned decreasing slightly overall since 2000

2 State and Federal Suppression Costs

- ◇ \$2.3 billion on fire suppression in the last 20 years – about **75% federal**, 25% state; real state costs per acre appear to be increasing

3 State and Federal Mitigation Projects

- ◇ Mitigation projects are relatively small but are carried out in strategic areas – are they associated with lower suppression costs?

4 Wildfire Hazard Potential and Cost: Measure from the U.S. Forest Service Fire Modeling Institute

- ◇ In the past 5 years (2021-2025) 4.1% of acres burned were in areas of “Very High” wildfire hazard potential but made up 32% of total state cost

5 Structure Loss by Fuel Type and Wildfire Hazard Potential

- ◇ In the past five years, more structures have been lost to grass fires than any other fuel type.

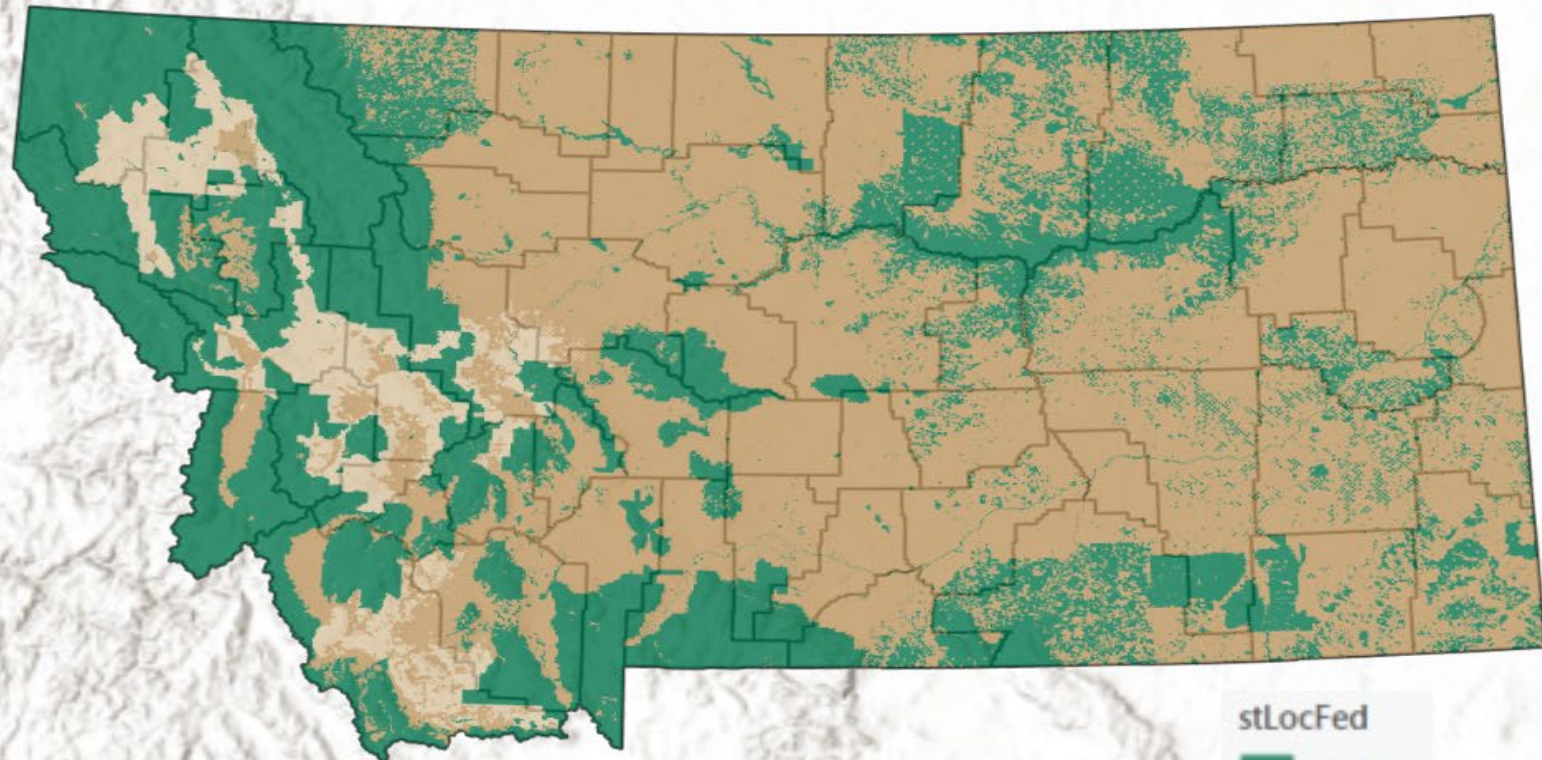
Background Information

State & Federal Responsibility, the “Wildfire Hazard Potential” Product, & the Montana Fire Suppression Fund

BACKGROUND

Responsibility for Fire Suppression

FED	33,531,688	35.64%
LOCAL	55,465,605	58.95%
STATE	5,089,481	5.41%
TOTAL ACRES	94,086,774	



stLocFed

- Fed
- local
- state



BACKGROUND

Wildfire Hazard Potential (WHP)

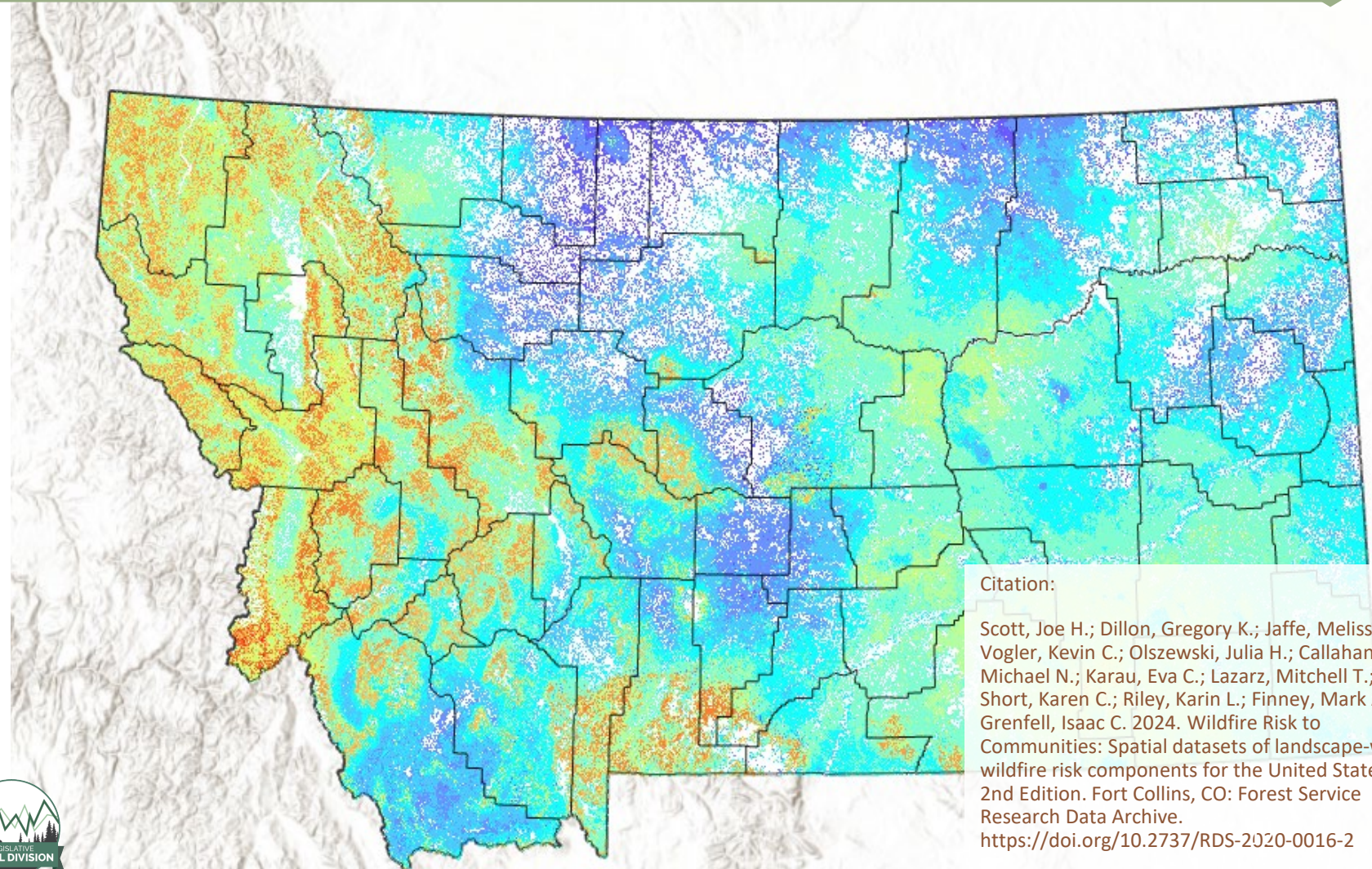
Data from the U.S. Forest Service Modeling Institute

Index Of These Factors

- ◇ Probability of wildfires
- ◇ Severity of wildfires
- ◇ Fire modeling results
- ◇ Historical fire locations
- ◇ Data on fuels and vegetation

Intended Use

- ◇ Depict the relative potential for high-intensity wildfire that may be difficult to manage in order to prioritize fuel treatments



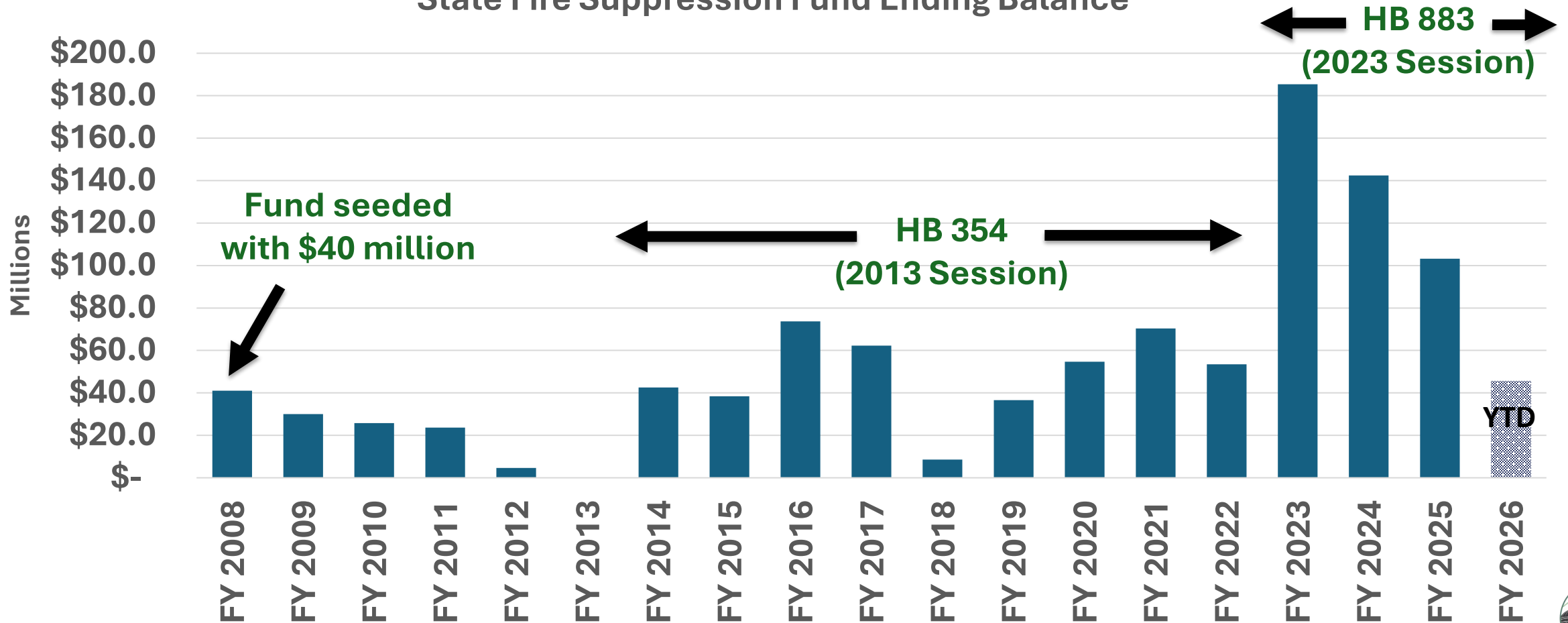
Citation:

Scott, Joe H.; Dillon, Gregory K.; Jaffe, Melissa R.; Vogler, Kevin C.; Olszewski, Julia H.; Callahan, Michael N.; Karau, Eva C.; Lazarz, Mitchell T.; Short, Karen C.; Riley, Karin L.; Finney, Mark A.; Grenfell, Isaac C. 2024. Wildfire Risk to Communities: Spatial datasets of landscape-wide wildfire risk components for the United States. 2nd Edition. Fort Collins, CO: Forest Service Research Data Archive. <https://doi.org/10.2737/RDS-2020-0016-2>

BACKGROUND

Montana Fire Suppression State Special Revenue Account

State Fire Suppression Fund Ending Balance



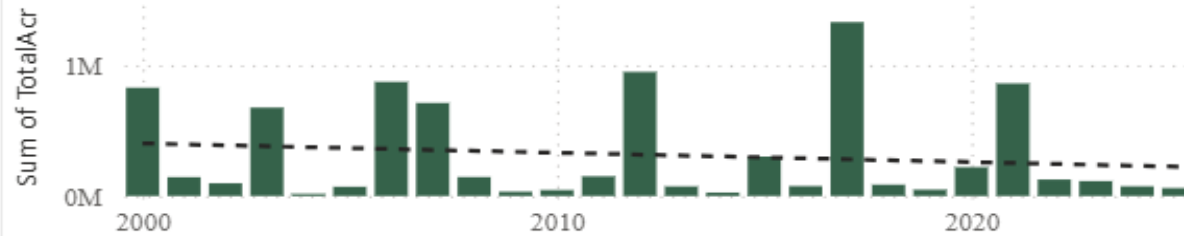
5 Preliminary Observations

History of Wildfires in Montana

Acres Burned by Year

Average Acres
Burned in
Selected Years

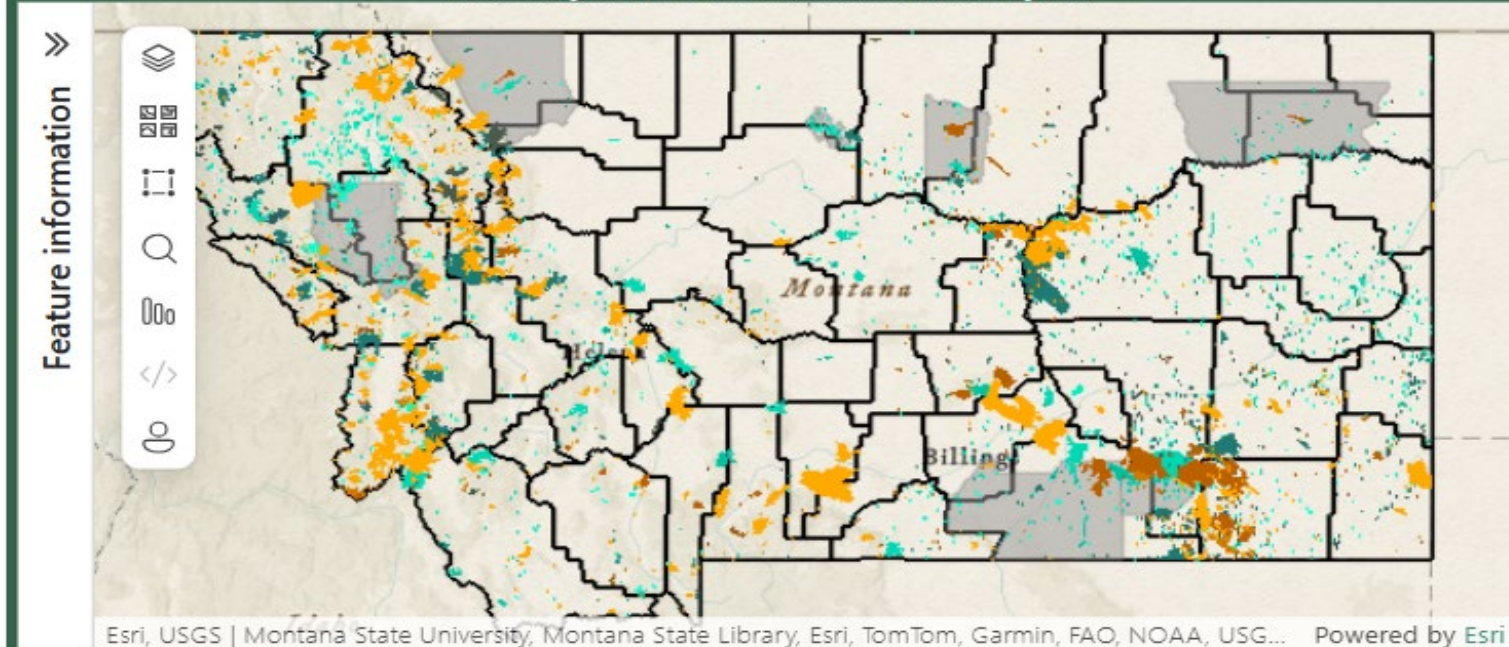
312,711



Data for this page was compiled from the National Interagency Fire Center (NIFC)

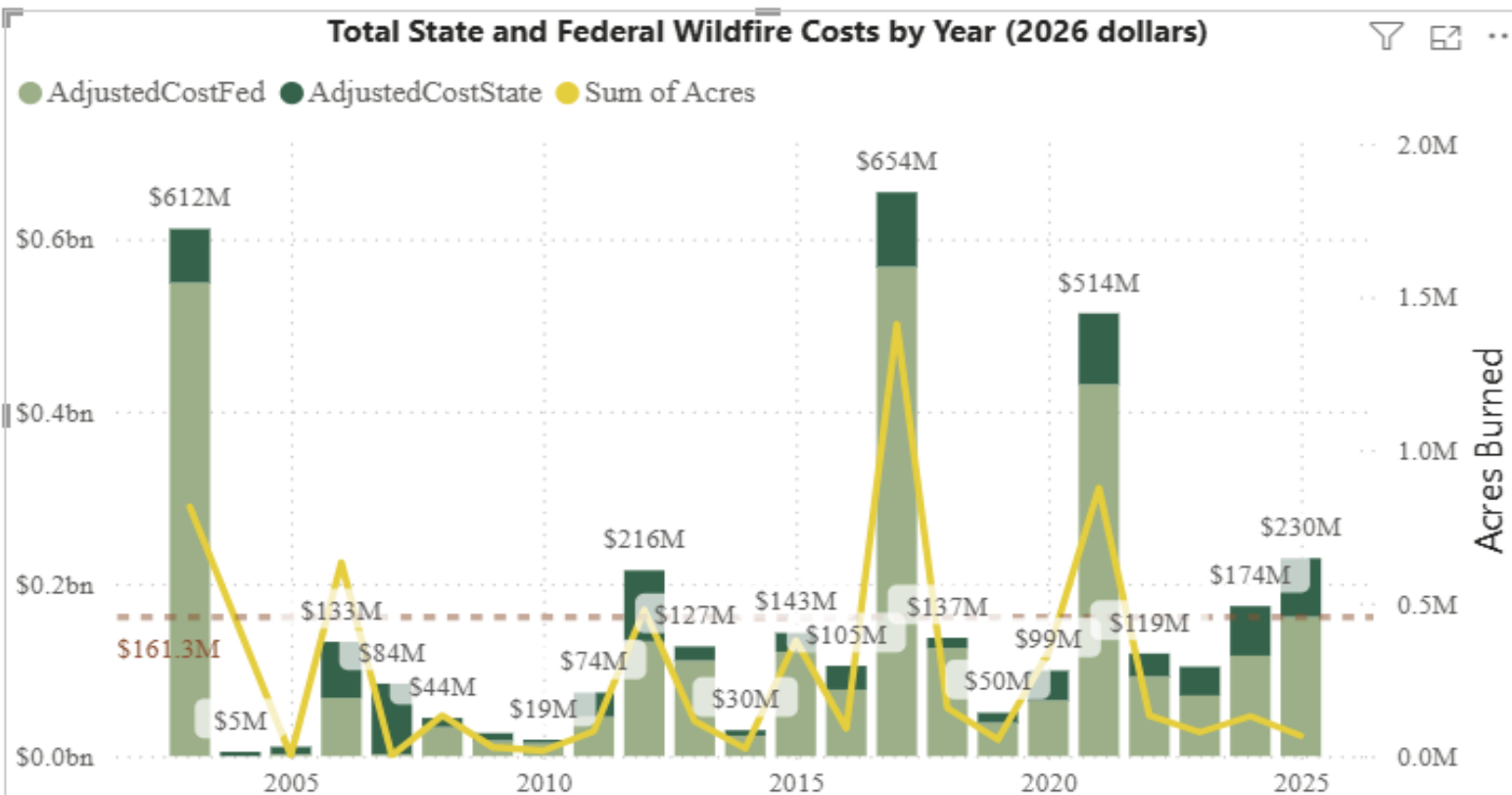
Montana Wildfires 1886 -2025

Fires are symbolized to show contrast between years



Observation 1:
Acres Burned
Decreasing Slightly
Since 2000

State & Federal Suppression Cost



Observation 2:

Costs are about 75%
Federal / 25% State;
Real State Cost per Acre
Appears to be Increasing

Total Suppression Costs in Selected Years

Federal 77.1%, Montana 27.4%

Federal

\$2,119,738,259

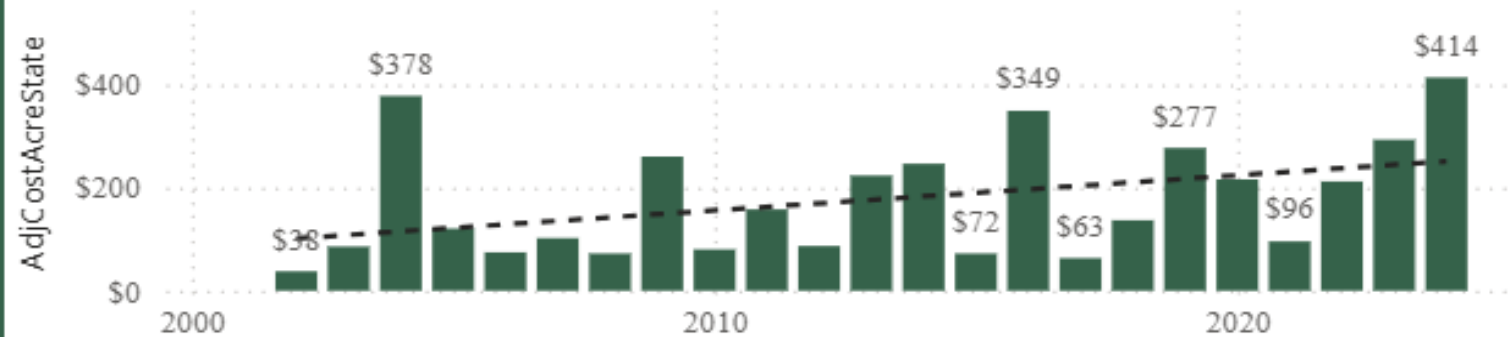
Montana

\$629,800,000

State & Federal Suppression Cost

Adjusted Cost Per Acre by Year

Adjusted Annual Per Acre Cost for Selected Years: \$106



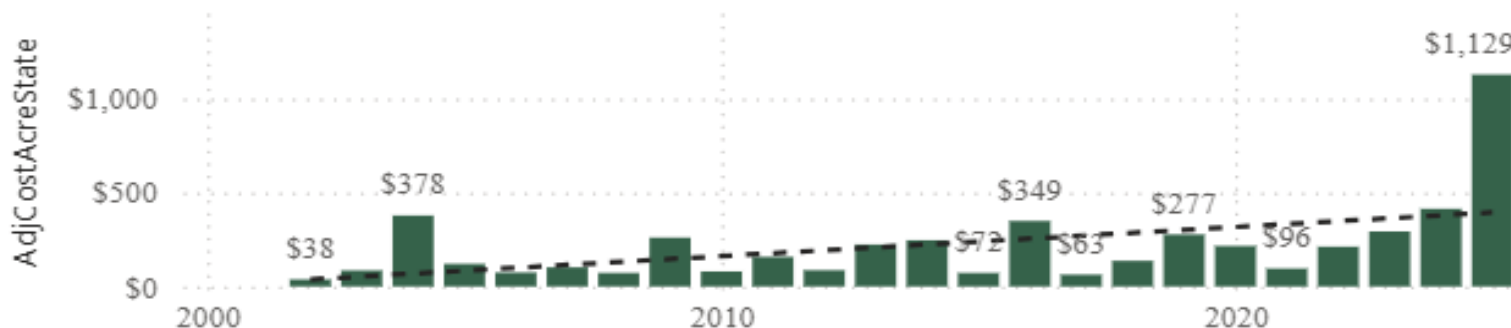
Observation 2:

Costs are about 75%
Federal / 25% State;

Real State Cost per Acre
Appears to be Increasing

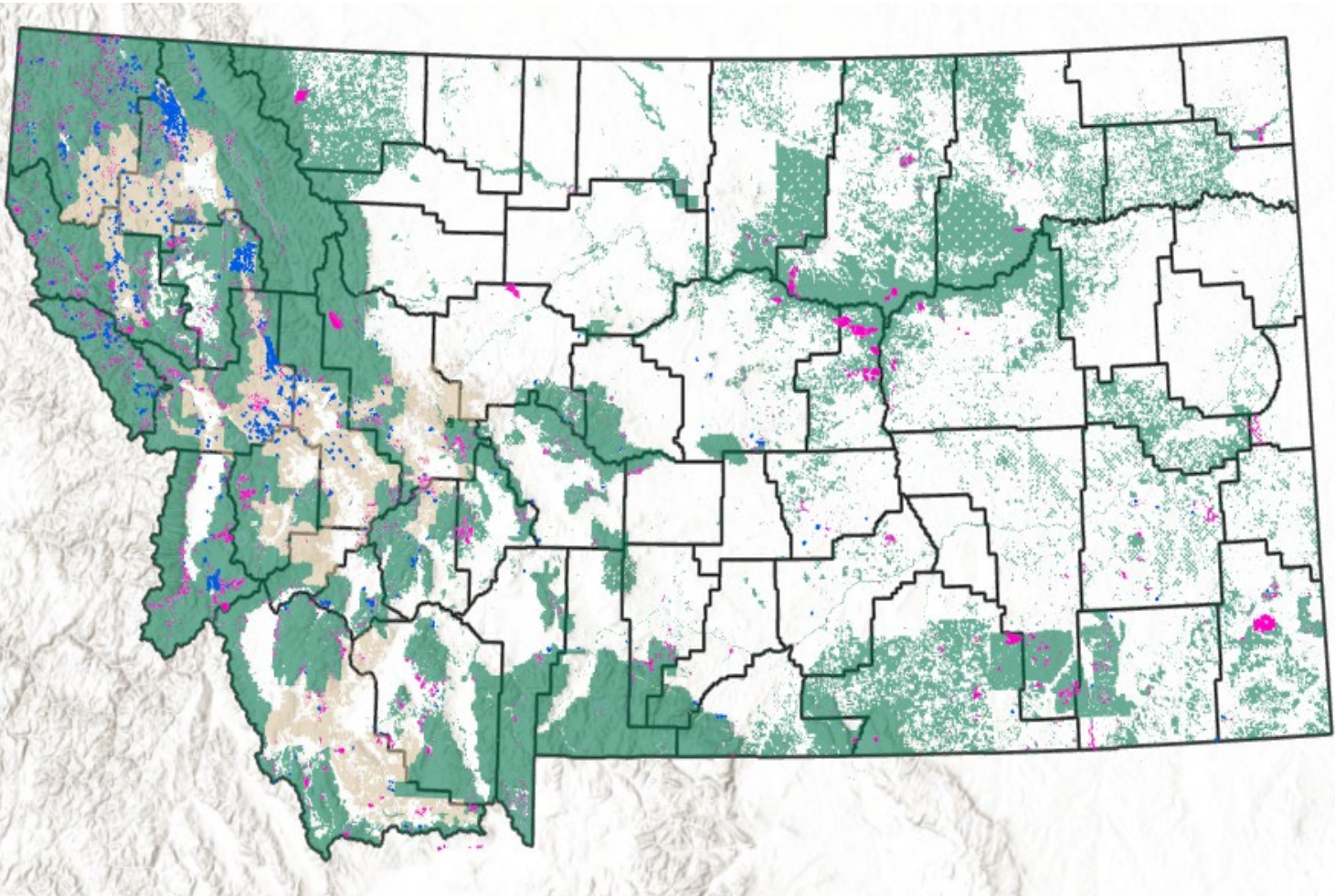
Adjusted Cost Per Acre by Year

Adjusted Annual Per Acre Cost for Selected Years: \$115



State & Federal Mitigation Projects

Research Question: Are mitigation projects associated with lower suppression costs?



Observation 3:

Mitigation Projects are
Relatively Small, but
Strategic

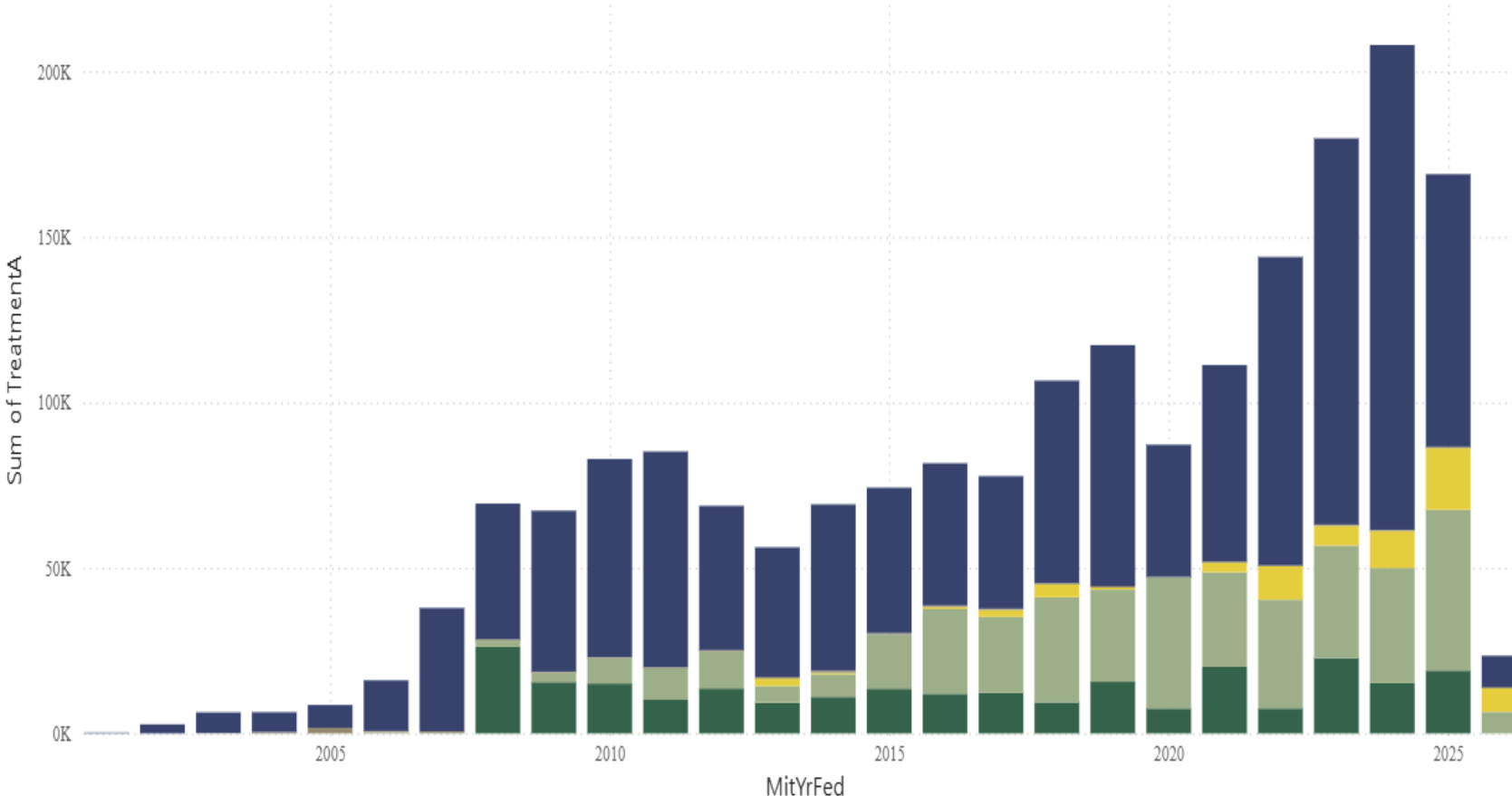
FEDERAL	1,955,279	Since 2000
STATE	146,275	Since 2021
TOTAL ACRES	2,101,554	

State & Federal Mitigation Projects

Research Question: Are mitigation projects associated with lower suppression costs?

Treatment Acres by Federal Agency

Agency ● BIA ● BLM ● FWS ● NPS ● USFS



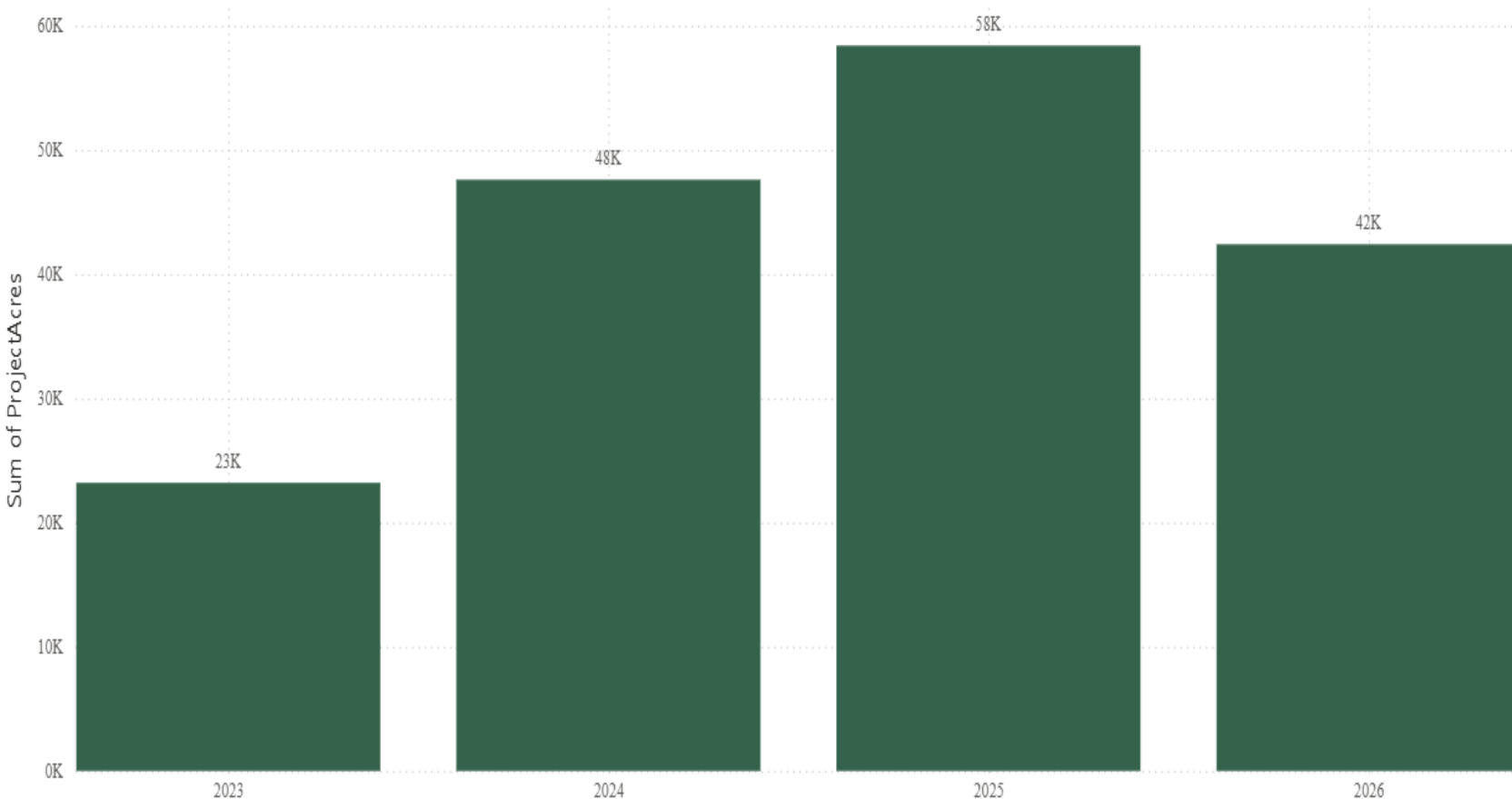
Observation 3:
Mitigation Projects are
Relatively Small, but
Strategic

State & Federal Mitigation Projects

HB 883 (2023 Session)

Permits DNRC to utilize a portion of the Fire Suppression Fund for mitigation depending on fund balance

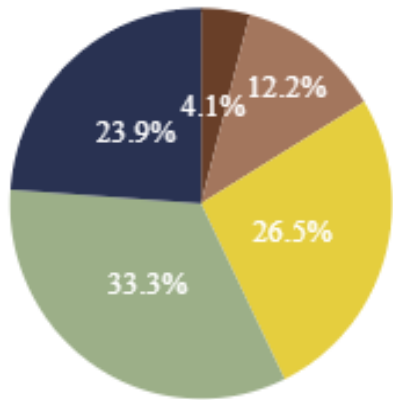
Treatment Acres by The State of Montana



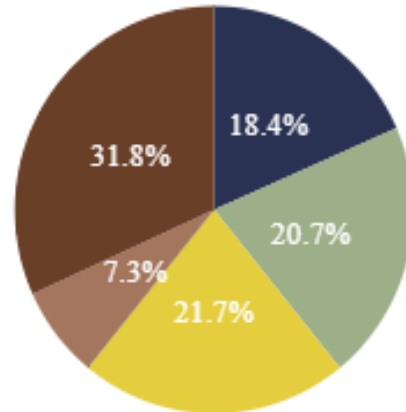
Observation 3:
Mitigation Projects are
Relatively Small, but
Strategic

Wildfire Hazard Potential (WHP) & Cost

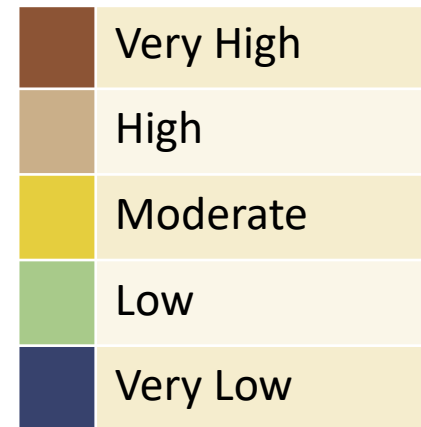
Acres Burned by Wildfire
Hazard Potential



Total State Costs by Wildfire
Hazard Potential



WHP Legend

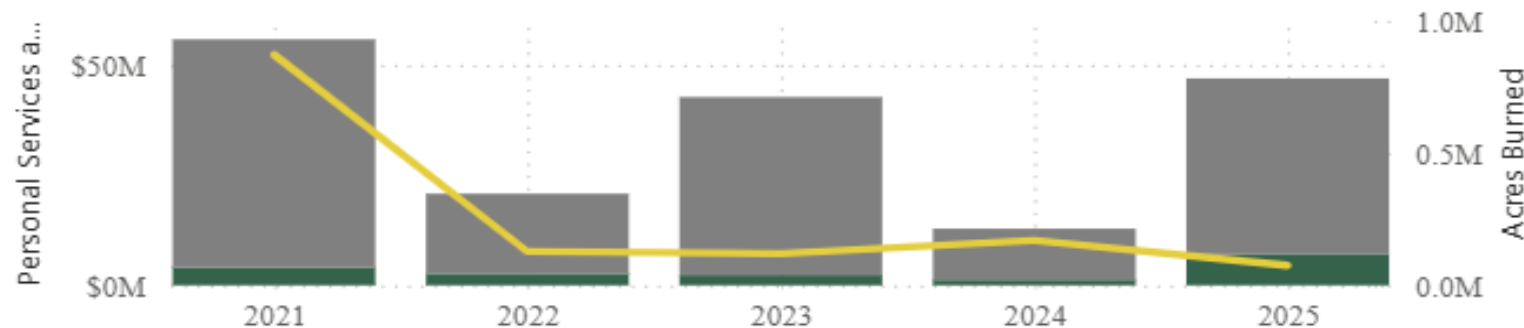


Observation 4:

In the past 5 years, 4.1% of acres burned were in areas of “Very High” WHP, but made up 32% of State Cost

State Costs and Acres Burned by Year

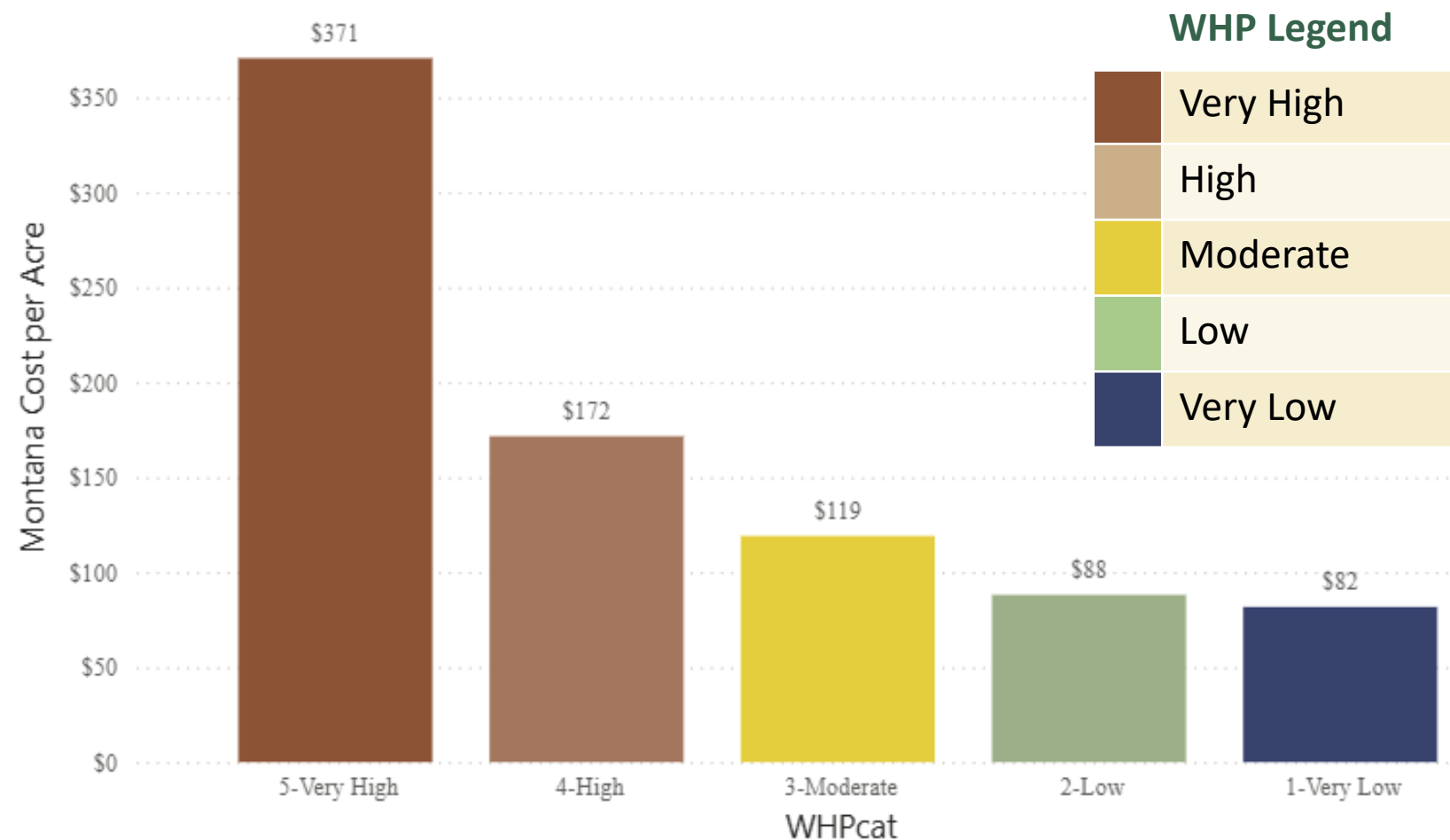
● Personal Services a... ● Operating costs ● Acres Burned



Wildfire Hazard Potential (WHP) & Cost

Cost per Acre by Risk Category based on Wildfire Hazard Potential

All Fires: Average Cost Per Acre \$162



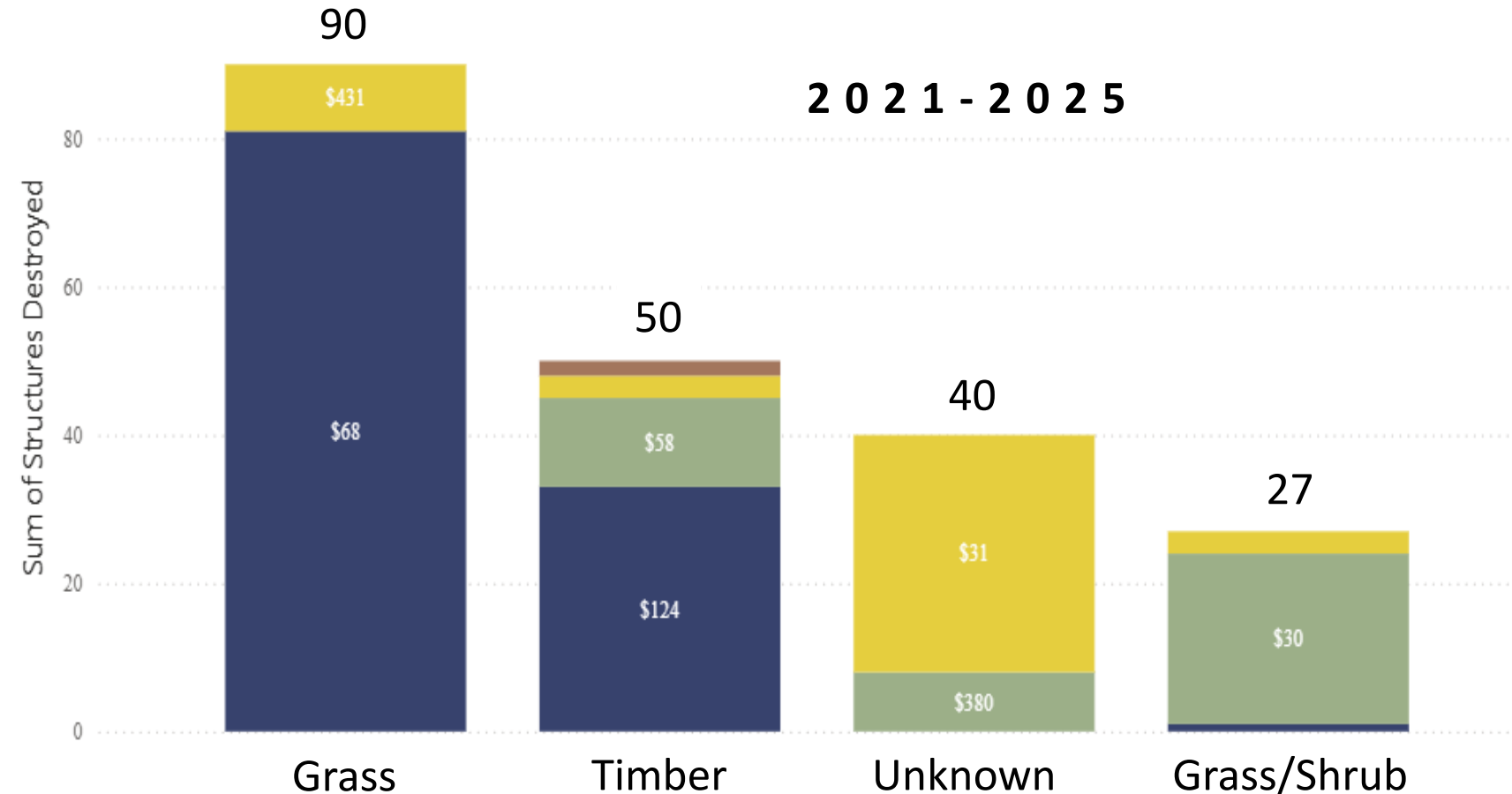
Observation 4:

In the past 5 years, 4.1% of acres burned were in areas of “Very High” WHP, but made up 32% of State Cost

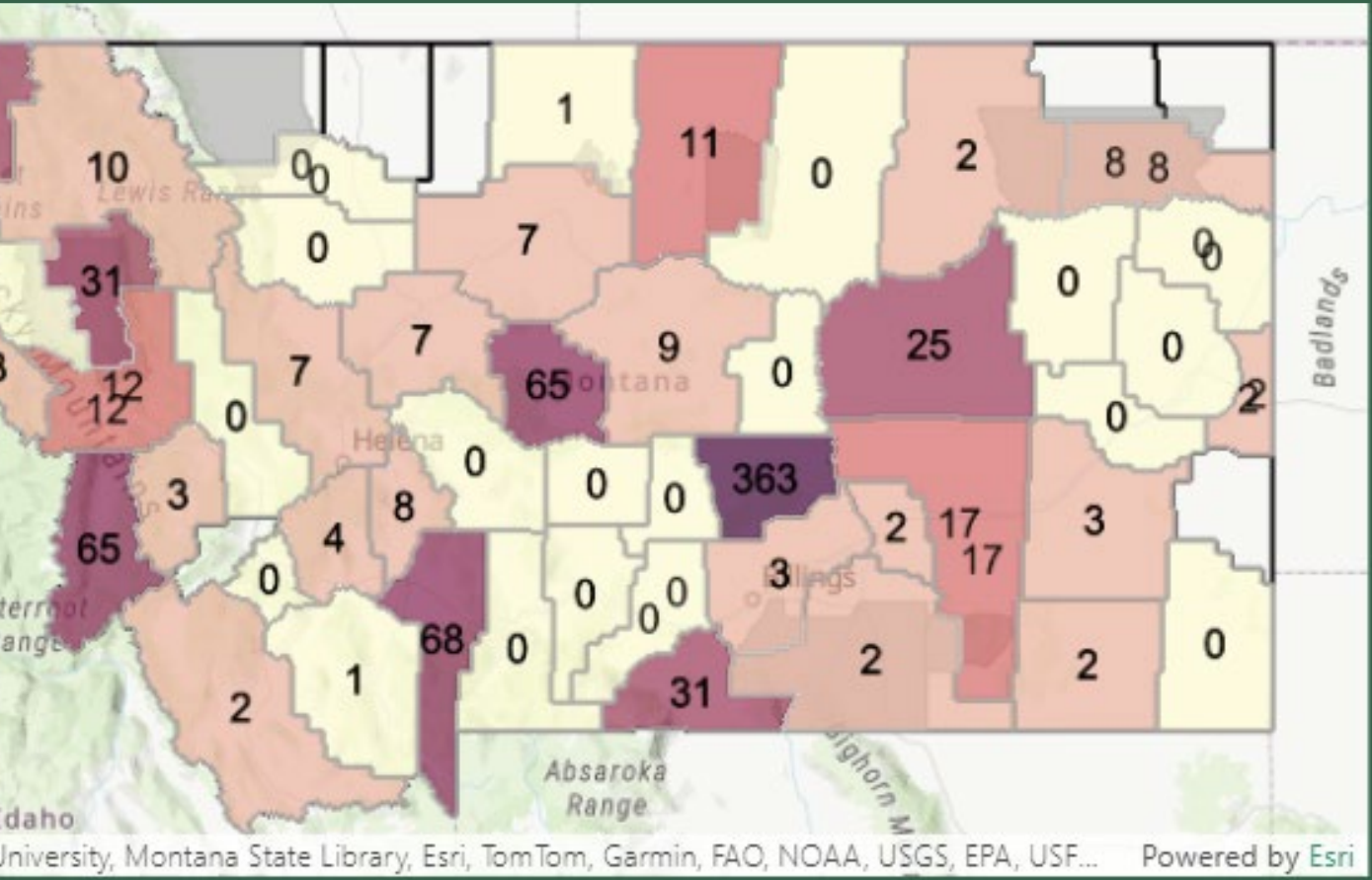
Structure Loss by Fuel Type & WHP

Sum of Structures Destroyed and Montana Cost per Acre by Predominant Fuel and Risk Category

WHP_Category ● 1-Very Low ● 2-Low ● 3-Moderate ● 4-High



Observation 5:
In the past 5 years,
structure loss is
associated with grass
fires



In the past 5 years,
structure loss is
associated with grass
fires

Review of 5 Preliminary Observations from Updated Model

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5 Structure Loss by Fuel Type and Wildfire Hazard Potential

- ◇ In the past five years, more structures have been lost to grass fires than any other fuel type.

Next Steps & Feedback

Next Steps



- ◇ Incorporate Legislative Feedback, Questions, & Ideas
- ◇ Model Refinement & Accessibility Improvement
- ◇ External Validation with Experts
- ◇ Position the Tool to be Useful to Policymakers Entering the 2027 Session



Questions & Feedback
