

# **We Have Wildfires?**

## **Using GIS to Communicate Natural Hazard Risk to the Public**

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Rural Operations Coordinator

Bellefontaine Fire & EMS



**Hyatt Regency Columbus**  
Columbus, Ohio

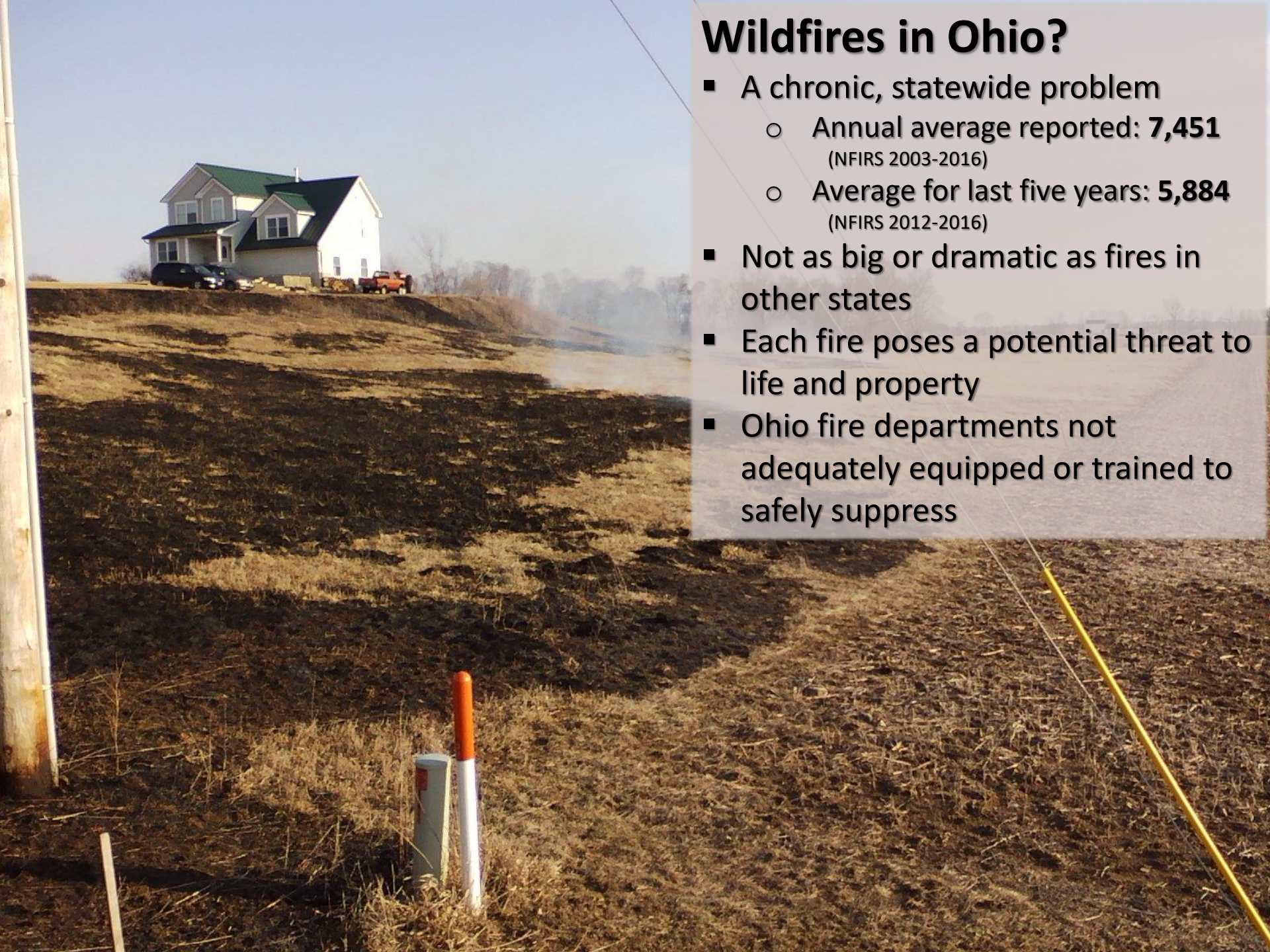
**Ohio GIS Conference**

***September 25 – 27, 2017***



# Wildfires in Ohio?

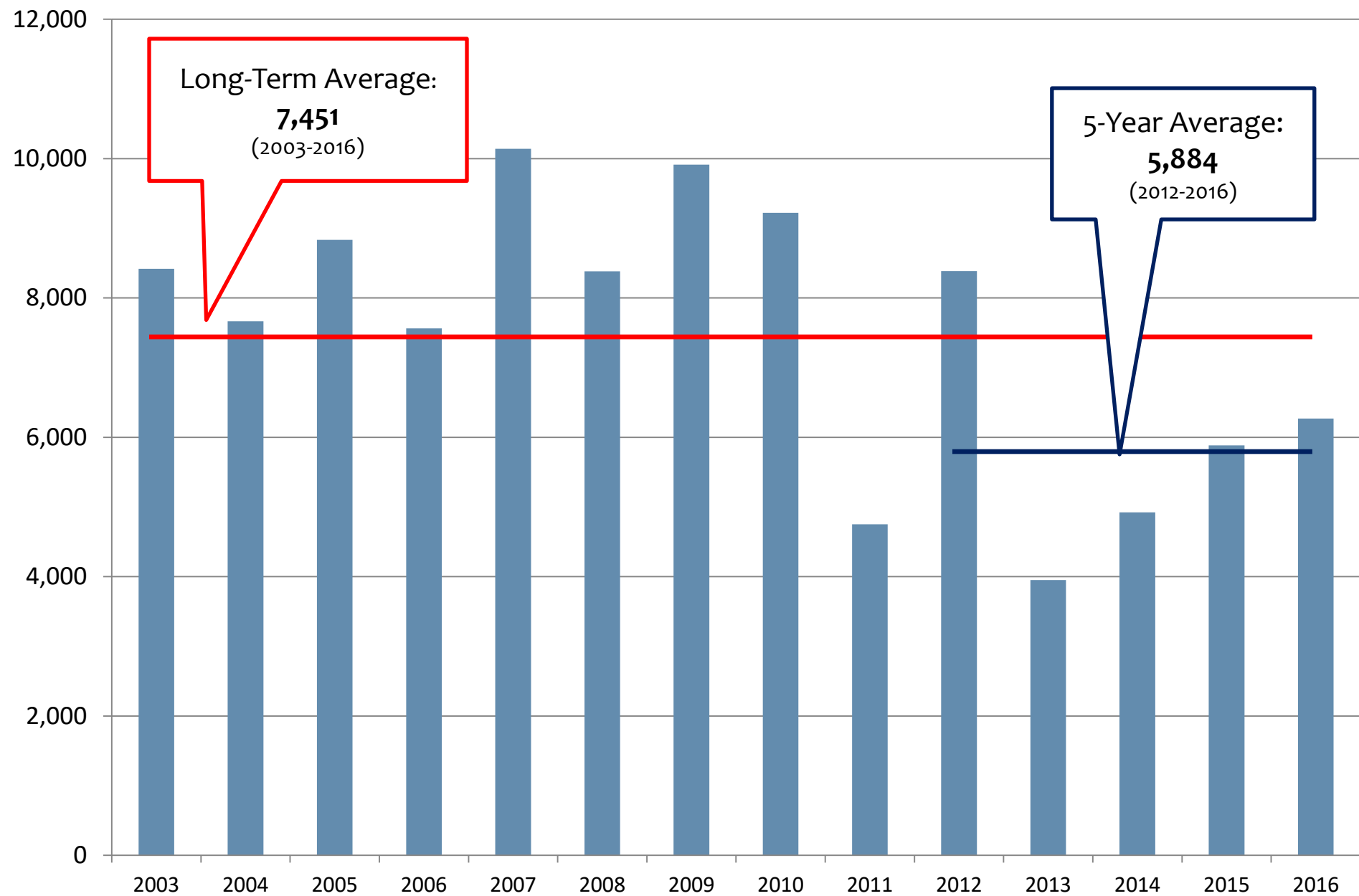
- A chronic, statewide problem
  - Annual average reported: **7,451**  
(NFIRS 2003-2016)
  - Average for last five years: **5,884**  
(NFIRS 2012-2016)
- Not as big or dramatic as fires in other states
- Each fire poses a potential threat to life and property
- Ohio fire departments not adequately equipped or trained to safely suppress





# Ohio Wildfires

## 2003-2016 NFIRS Reporting

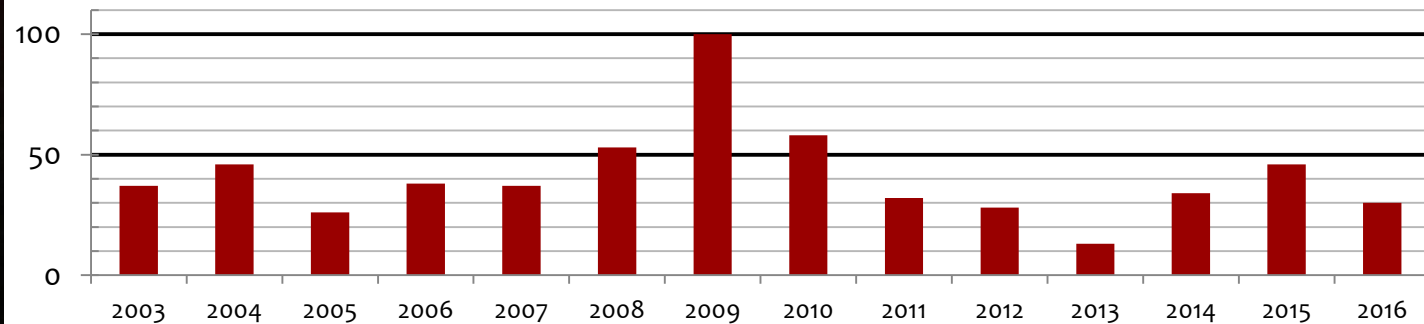


# Wildfires in Logan County



**Logan County Wildfires**  
2003-2016 NFIRS Reporting

Long-Term Avg: **41/yr**  
Five-Year Avg: **30/yr**



# 95% Human Caused (at least)



Field fire caused by careless dumping of charcoal grill ashes (Logan County, March 2016); there were 10+ piles of ashes before one finally started a fire





# Wildfire Hazard Classification Factors

Possible Score Range: 5 – 22

## Fire Environment (3 – 11)

- Fire History (1 – 4)
- Fuels (1 – 3)
- Slope (1 – 4)

## Fire Dept. Response (2 – 8)

- Brush Unit Distance (1 – 4)
- Fire Dept. Staffing (1 – 4)

## Modifiers (0 – 2)

- WUI Blocks (+1)
- Limited Water Supply (+1)

## Hazard Classes

**High**

15 – 22

1.9%

**Moderate**

12 – 14

64.2%

**Low**

8 – 11

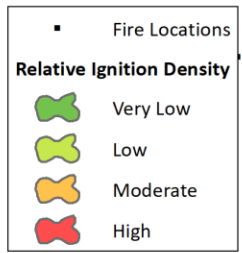
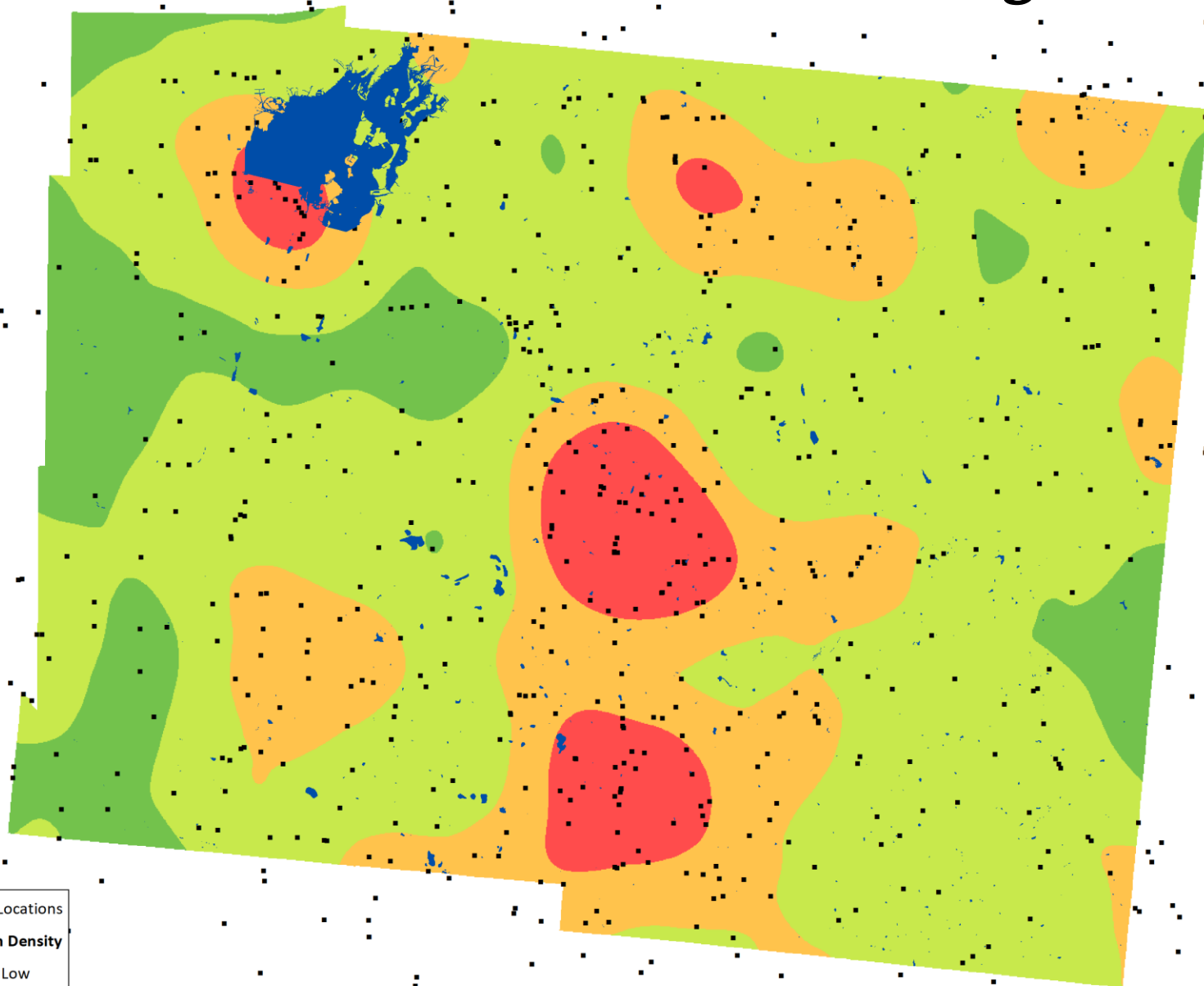
27.5%

**Very Low**

3 – 7

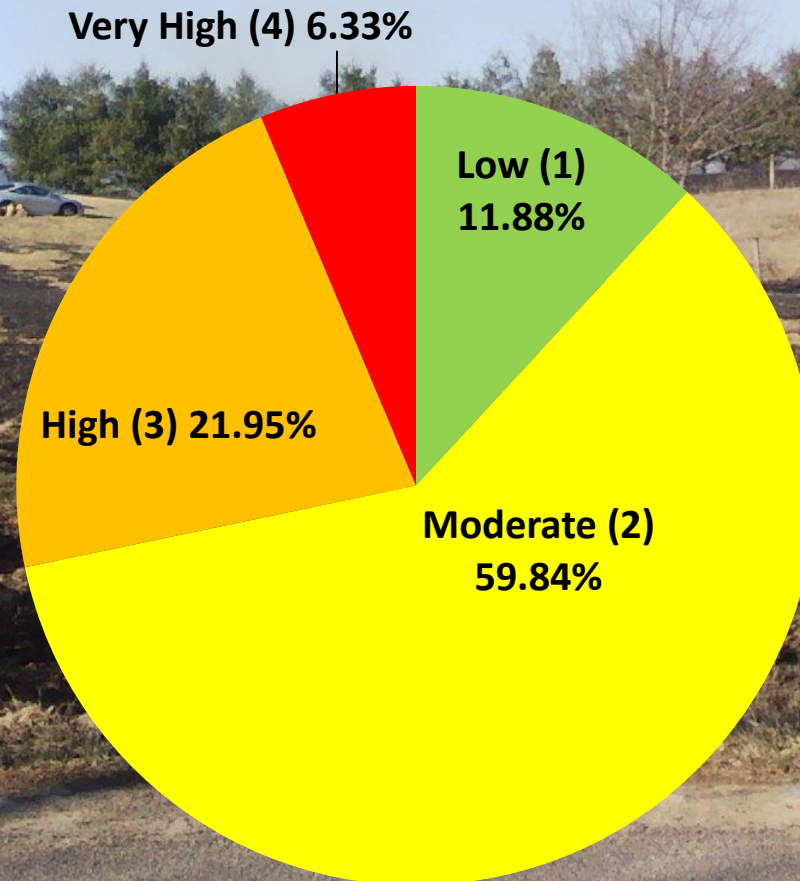
1.5%

# Historic Ignition Density



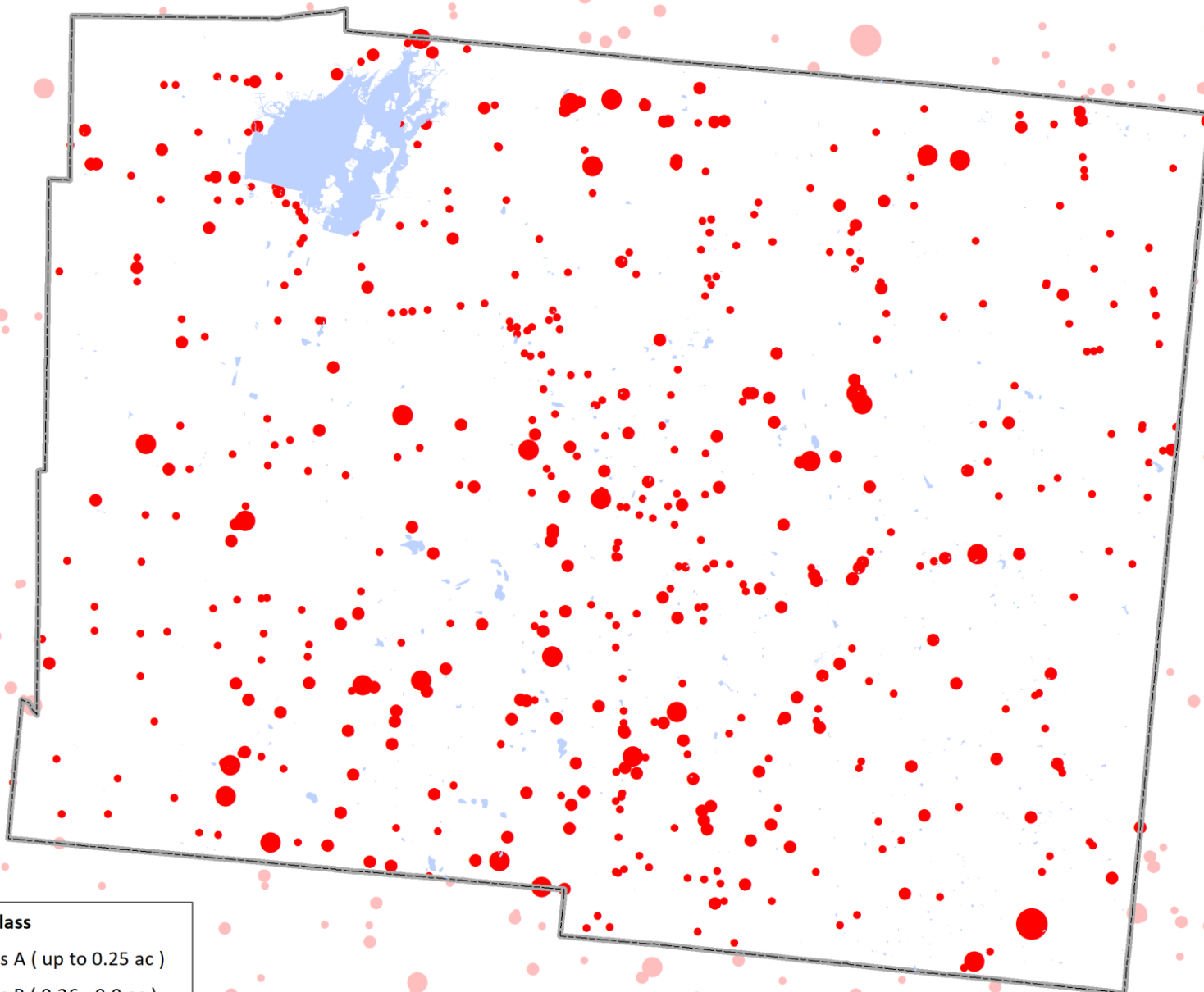
# Fire Occurrence Class

Percentage of Land Area





# Fire Size Class Distribution

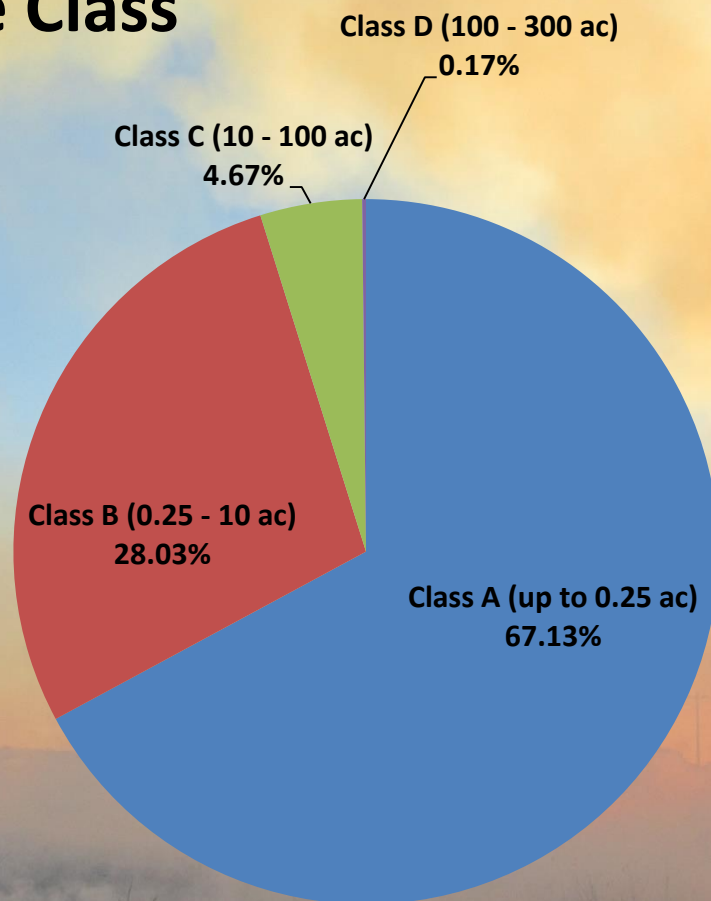


## NWCG Size Class

- Class A ( up to 0.25 ac )
- Class B ( 0.26 - 9.9 ac )
- Class C ( 10.0 - 99.9 ac )
- Class D ( 100.0 - 299.9 ac )

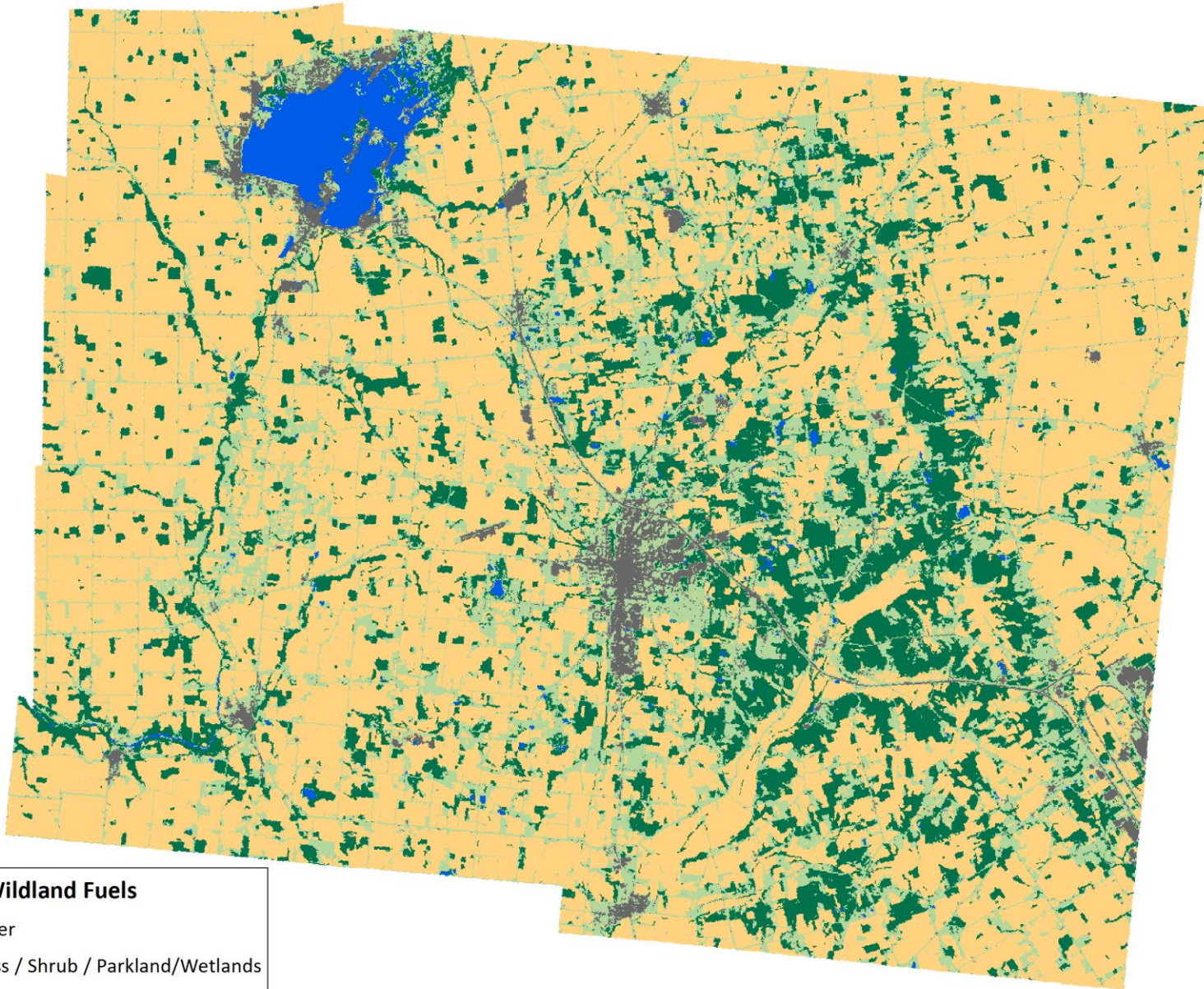
# Fires by NWCG Size Class

Logan County, Ohio 2003-2016





# Potential Wildland Fuels



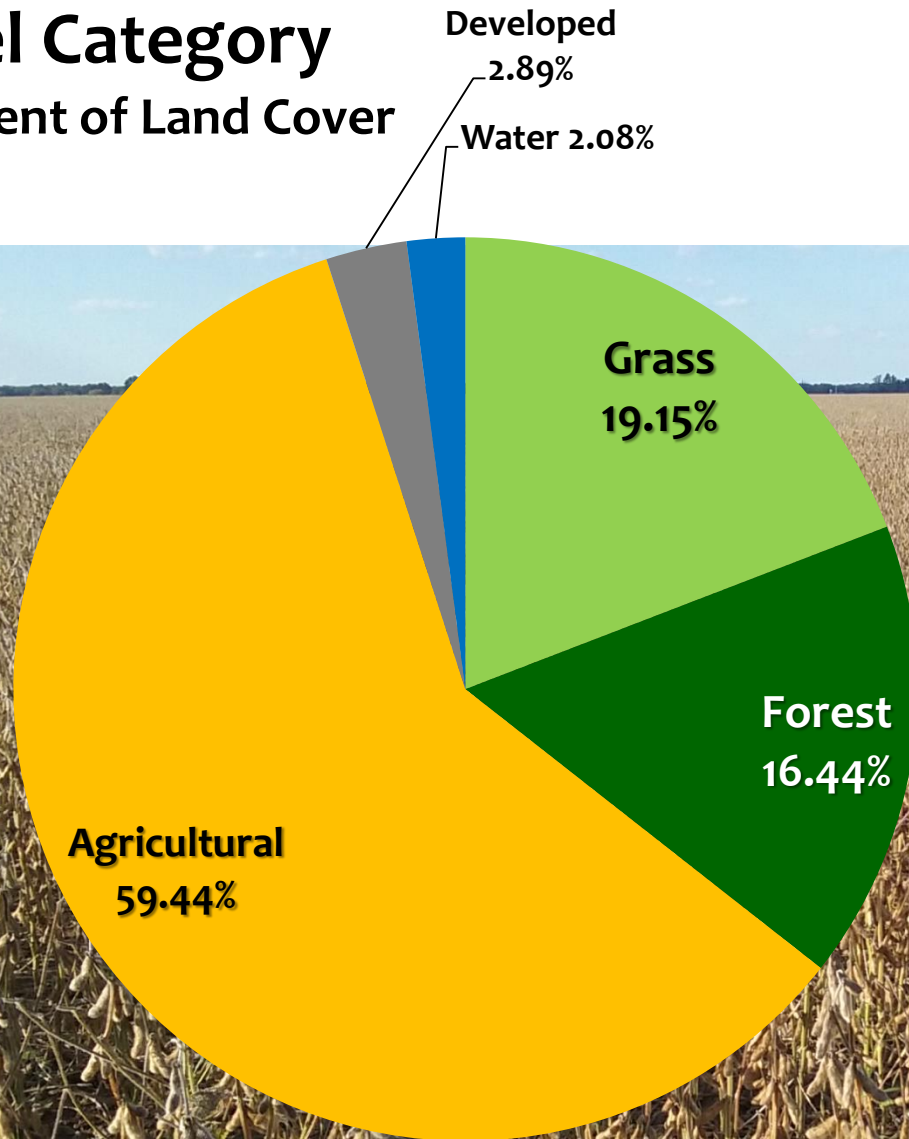
## Potential Wildland Fuels

-  Water
-  Grass / Shrub / Parkland/Wetlands
-  Forest
-  Developed / Barren
-  Agricultural



# Fuel Category

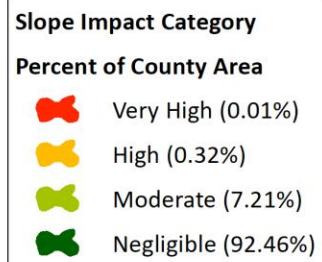
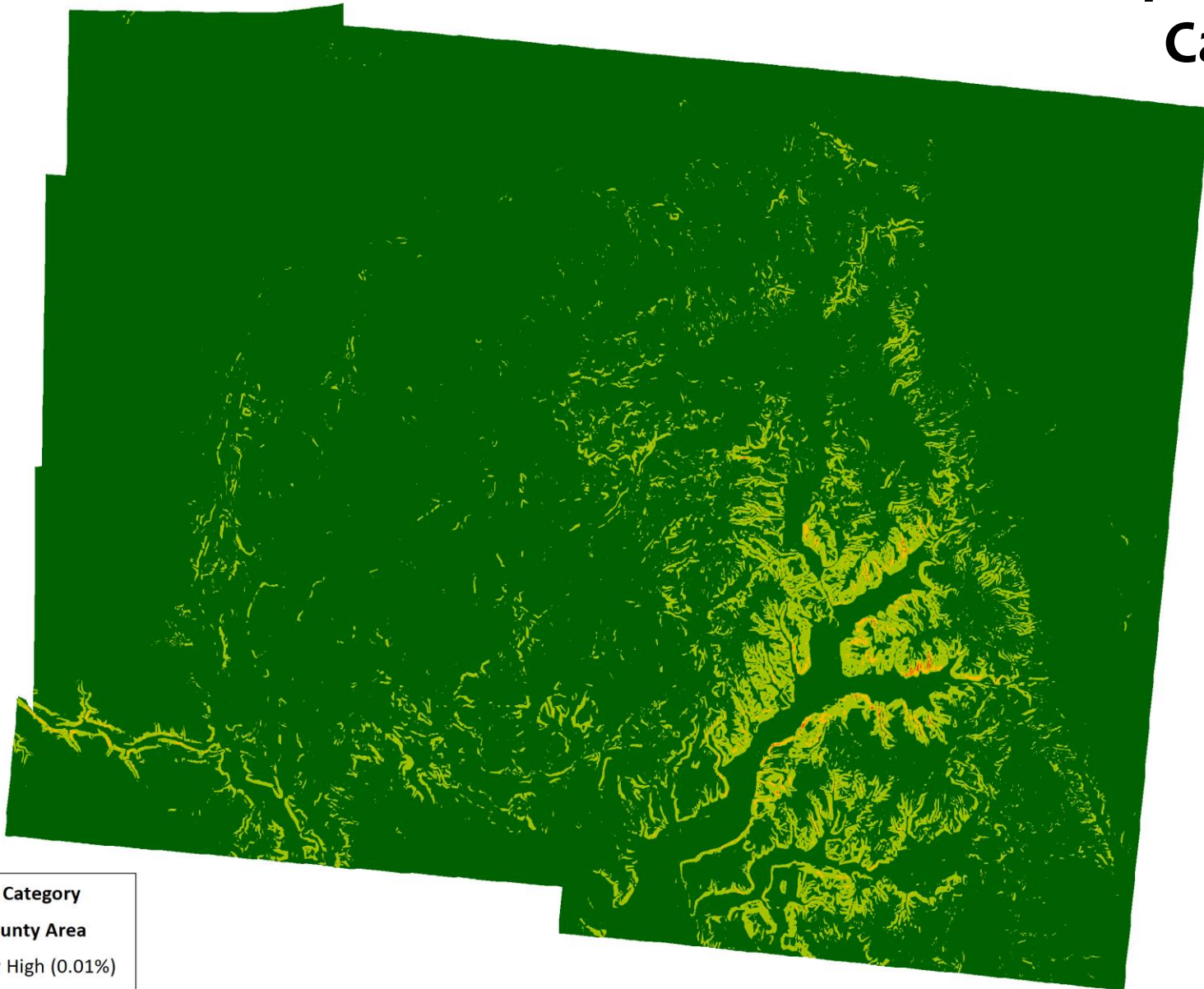
## Percent of Land Cover



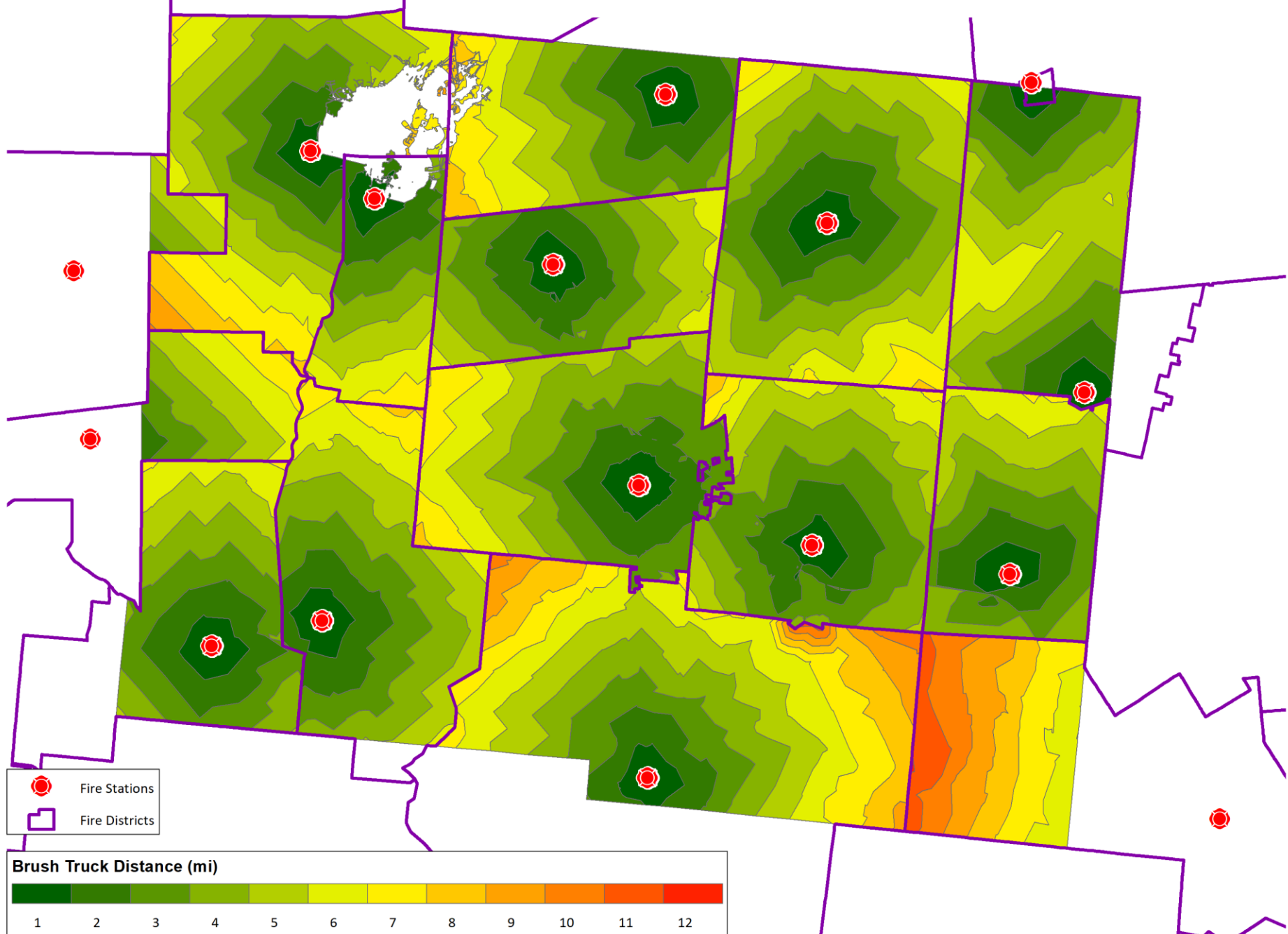
Category	Hazard Class
Agricultural	High (3)
Forest	Moderate (2)
Grass, etc.	Low (1)
Not Burnable (developed, water)	None (0)
Fuels derived from 2016 USDA CropScape land cover data	



# Slope Impact Category

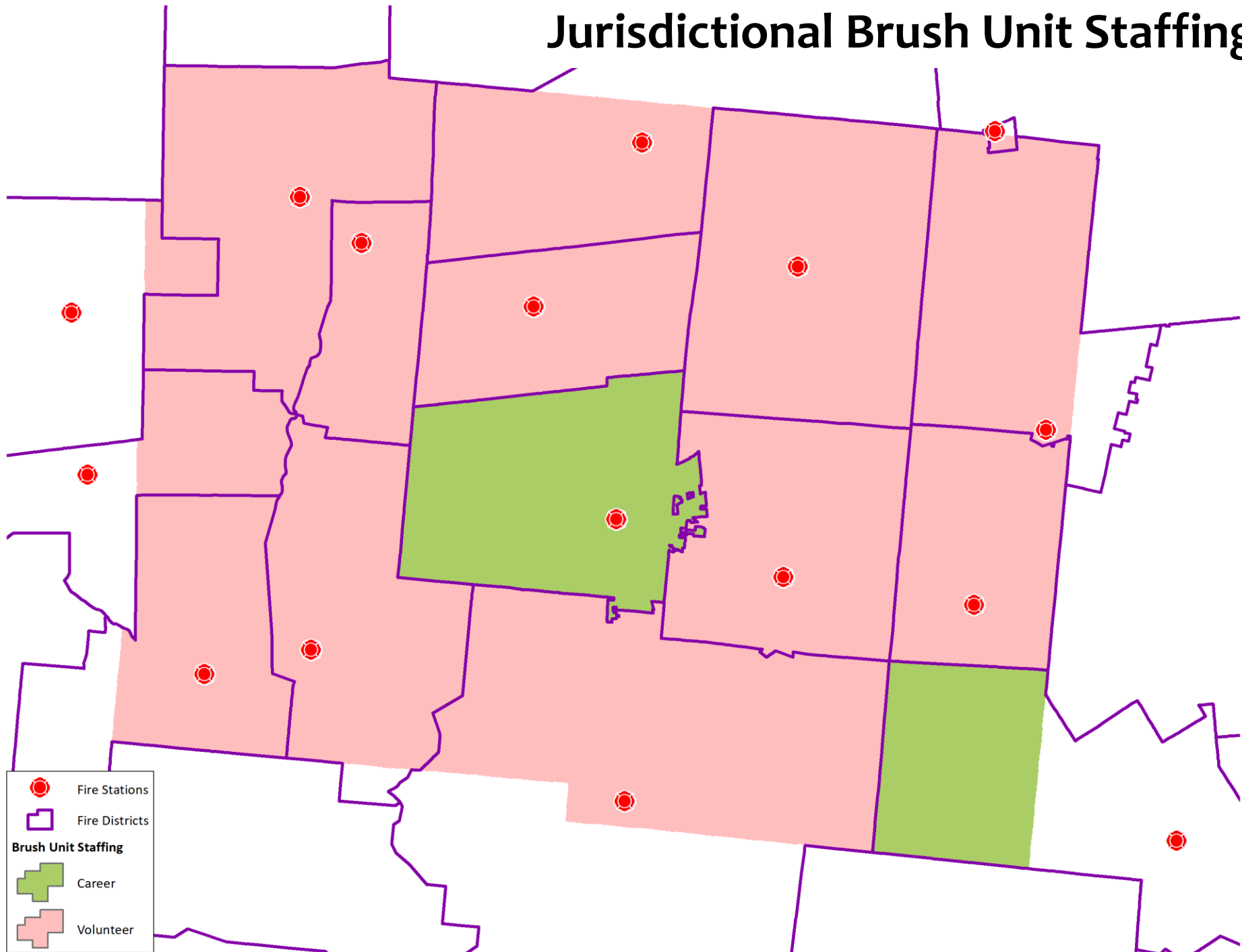


# Distance to Jurisdictional Brush Unit

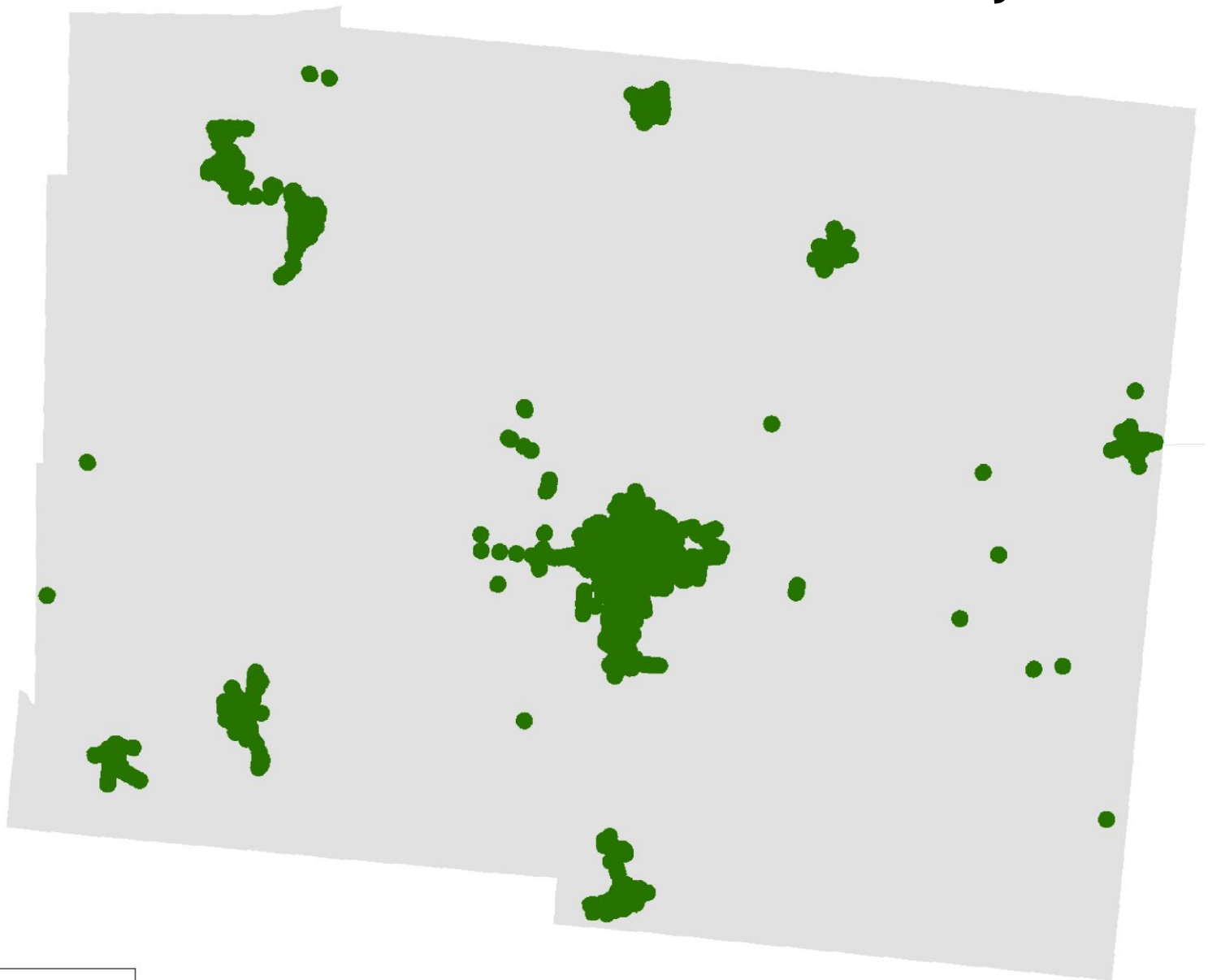




# Jurisdictional Brush Unit Staffing



# Hydranted Areas



## Hydranted Areas



Hydranted (0)

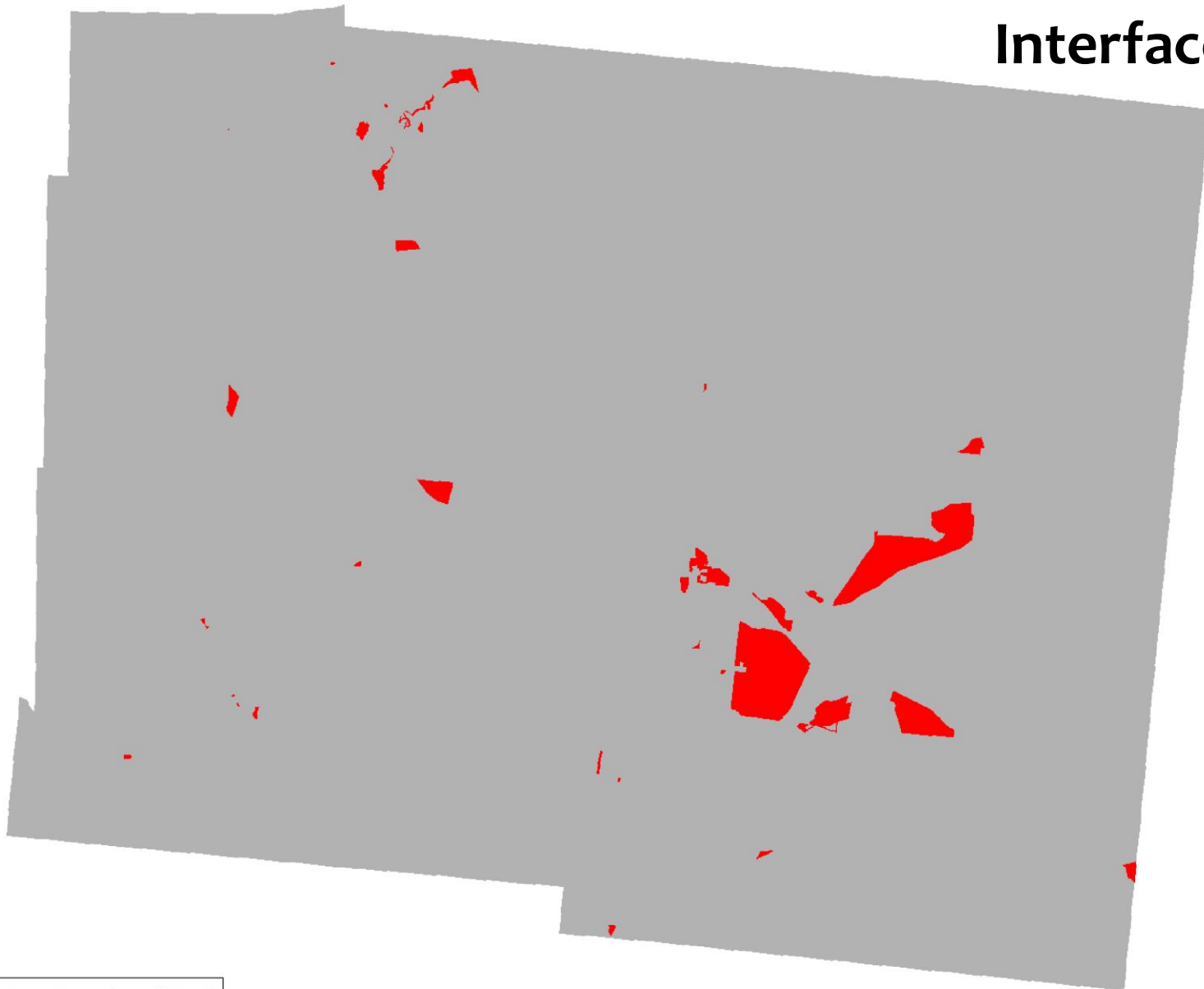


Not Hydranted (+1)

**4.6% of total area**



# Wildland-Urban Interface (WUI)



## Wildland-Urban Interface (WUI)



Not WUI (0)



WUI (+1)

**1.7% of total area**

More Info on USFS Study:  
<http://www.nrs.fs.fed.us/data/WUI>

# Composite Hazard Classification

## Logan Wildfire Hazard 2017



High



Moderate



Low



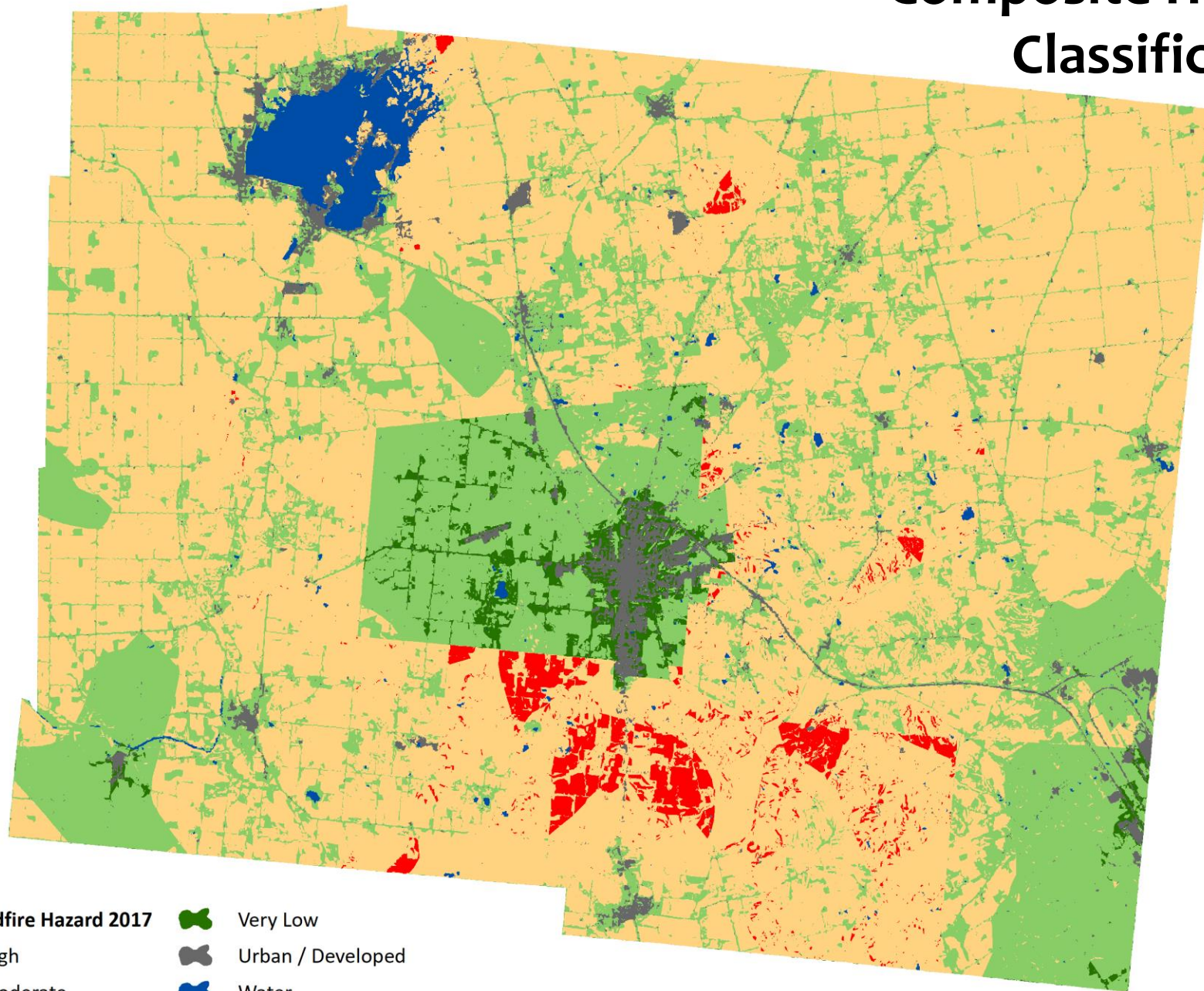
Very Low



Urban / Developed



Water



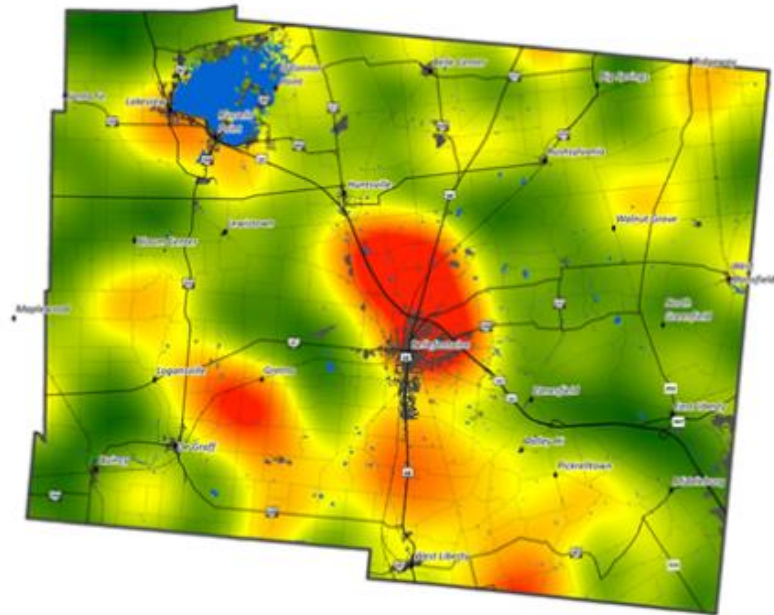
## Autumn fire occurrence data used in Facebook prevention messaging



**Bellefontaine Fire Department**

Published by Jeremy Keller [?] · September 4 at 3:52pm · 🌐

Labor Day represents the beginning of fall wildfire season in Logan County, running from September through November. This map shows where fall wildland fires have occurred from 2003-2016 (red = more, green = less). Are you in a "hot spot?" Vegetation is still pretty green right now, but will be cured and ready to burn in no time. Be safe with fire, and spread the word to your neighbors! #firewise #fireadapted #ruralfire



1,251 people reached

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# FIREWISE LOGAN COUNTY

RURAL FIRE SAFETY FOR LOGAN COUNTY, OHIO

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Featured

## FIREWISE LOGAN

Wildfire prevention and rural fire safety information for residents of the rural communities of Logan County, Ohio.

## TOO HOT TO TOUCH? TOO HOT TO LEAVE!

September 24, 2017

[Leave a comment](#)



Don't let your cookout turn into a catastrophe! Dumping hot coals from a grill into dry wildland fuels and crop stubble can spark a wildfire. Make sure your coals are completely cold before disposing of them.

[#firewise](#) [#fireadapted](#) [#ruralfire](#) Smokey Bear

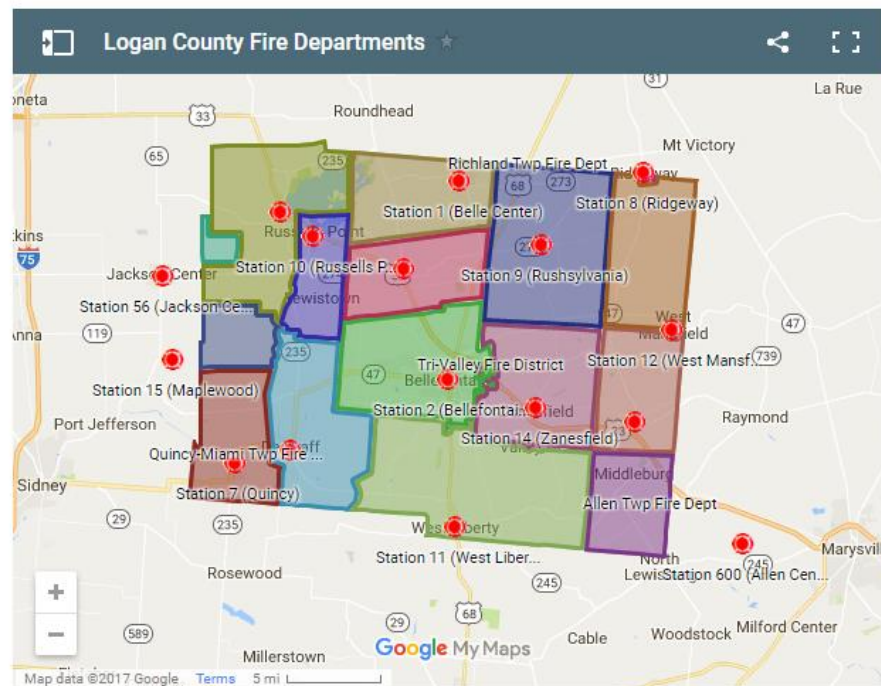


## FIREWISE LOGAN COUNTY

RURAL FIRE SAFETY FOR LOGAN COUNTY, OHIO

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## LOGAN COUNTY FIRE DEPARTMENTS



ONLY  
**YOU**  
CAN  
PREVENT  
WILDFIRES.



SmokeyBear.com







## ← Station 2 (Bellefontaine) ↗

name

Station 2 (Bellefontaine)

description

Grass 21 (Bellefontaine Fire & EMS)

Station Name Station 2 (Bellefontaine)

Fire Dept Full Name BELLEFONTAINE FIRE DEPARTMENT

Wildland / Grass Units G-21

Dispatch County Logan

Chief ANDY FISSEL

Address 201 W SANDUSKY AV

City BELLEFONTAINE

State OH

ZIP Code 43311

Station Phone (937) 599-6168

Total Firefighters 24

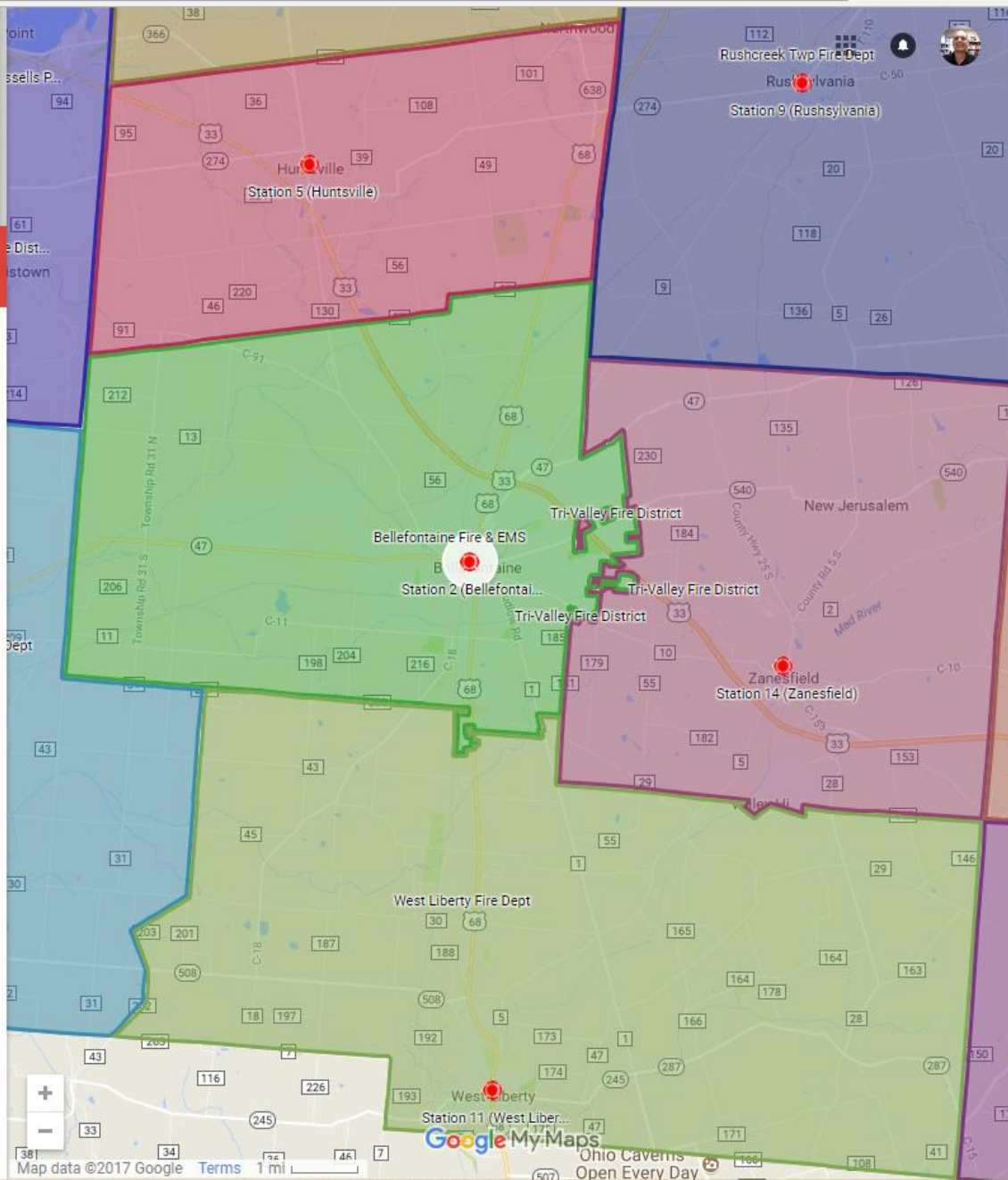
Paid / Full-Time 21

Paid-on-Call 0

Volunteer / Unpaid 3

Latitude 40.362462

Longitude -83.761949

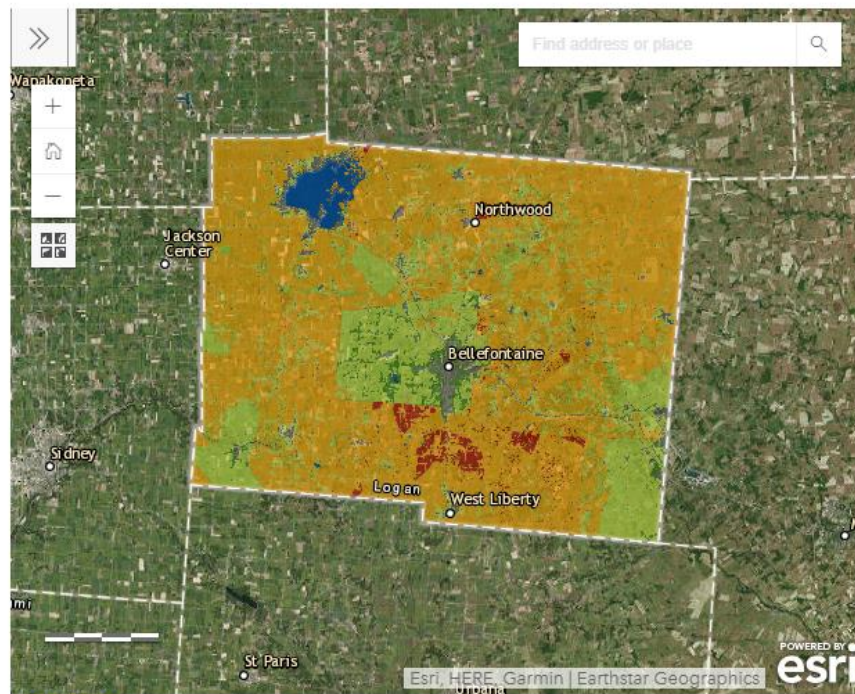




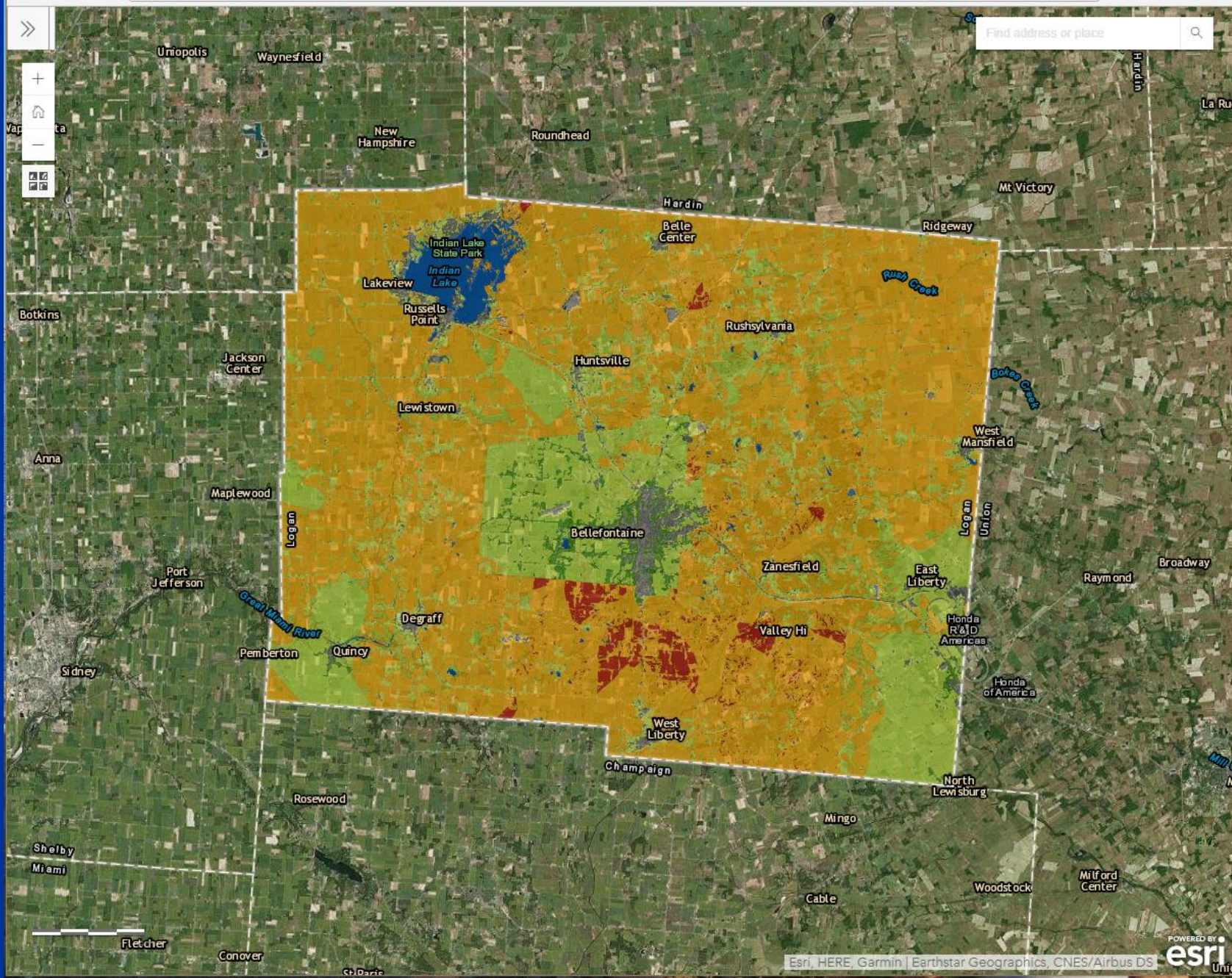
## LOGAN COUNTY WILDFIRE RISK

### WHAT'S YOUR WILDFIRE RISK, LOGAN COUNTY?

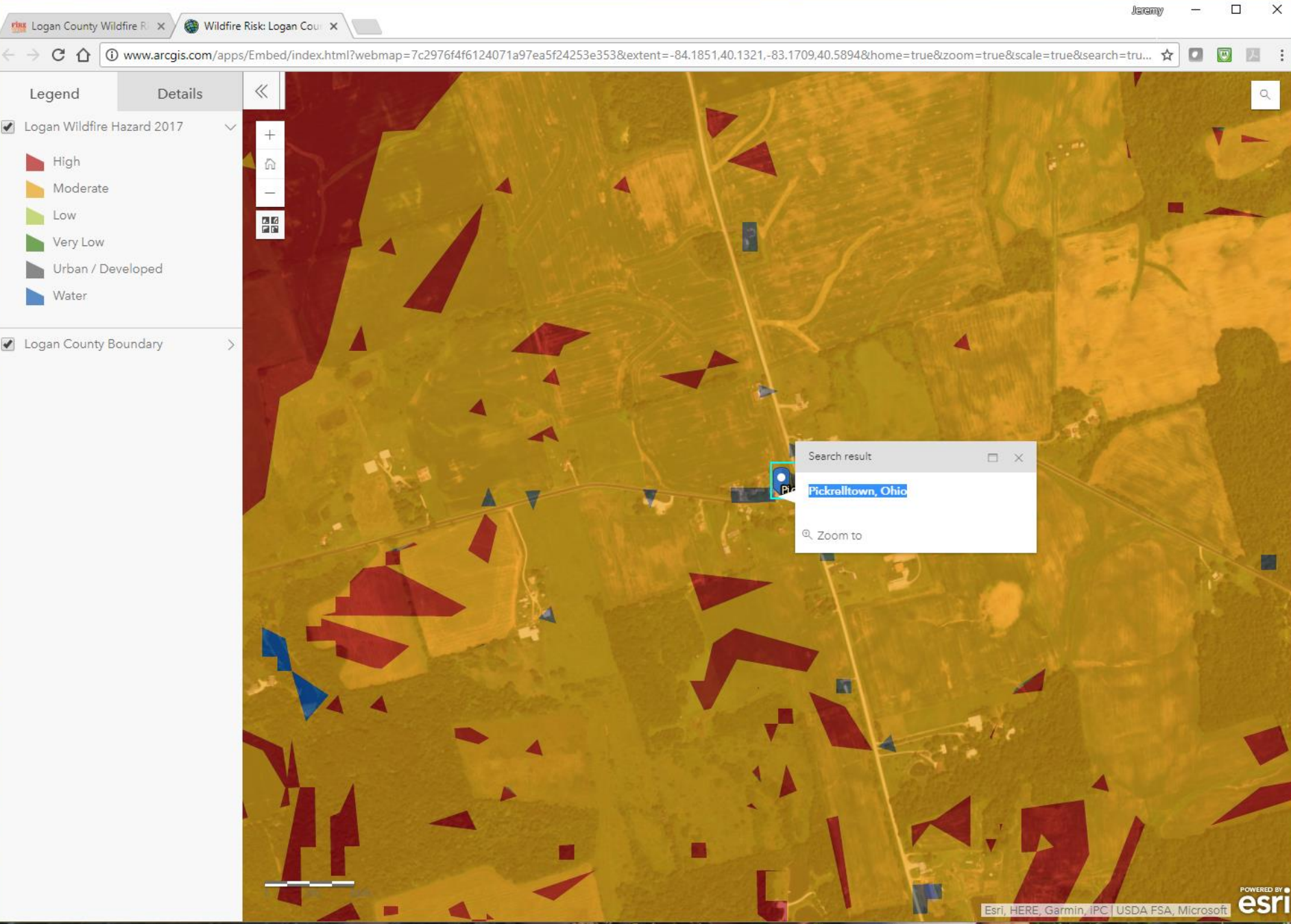
Type your address in the search bar — or just zoom in to your property — to see the relative wildfire risk for your neighborhood.

[View larger map](#)











# Thank You!

