

Arizona Wildfire Risk Assessment Portal – AzWRAP Know Your Risk



Arizona Wildland-Urban Interface
& Firewise Summit
April 1, 2016

Arizona State Forestry
Jim Downey



Introduction to AzWRAP

- Web based portal.
- Displays wildfire risk information
- Creates awareness about wildfire issues across Arizona.
- Displays Data from 2013 West Wide Wildfire Risk Assessment (WWA).

AzWRAP



- Provides baseline information needed to support mitigation and prevention efforts across Arizona.
- Designed so that information can be used in other plans or reports.
- Examples – Community Wildfire Protection Plans, Local Fire Plans, Fuels Mitigation Plans, Hazard Mitigation Plans, Forest Management Plans.



Targeted Users

- Public - local community groups, private landowners
- Professional - government officials, hazard-mitigation planners, and wildland fire managers.

West Wide Assessment (WWA)



- Conducted by Oregon Department of Forestry on behalf of the Council of Western State Foresters (CWSF) and Western Forestry Leadership Coalition (WFLC) funded by the Forest Service.
- Wildfire Risk Assessment for 17 western states.
- Outputs - Fire Threat, Fire Risk and Fire Effects.



West Wide Risk Assessment

– Key Data Layers

Wildfire Threat – the likelihood of an acre burning.

Wildfire Risk – the possibility of loss or harm occurring from a wildfire.

Fire Effects – incorporates values impacted with
Suppression difficulty



Fire Risk Index = Fire Threat Index and Fire Effects Index

Home Page

www.arizonawildfirerisk.com



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

HOME

ABOUT

SUPPORT

CONTACT

SIGN IN / REGISTER

APPLICATIONS

Public Viewer



Professional Viewer



Support Page - User Manual



Arizona Wildfire Risk Assessment Portal

(AzWRAP)

Public Viewer

User Manual

Home Page

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HOME

ABOUT

SUPPORT

CONTACT

SIGN IN / REGISTER

APPLICATIONS

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ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

HOME

ABOUT

SUPPORT

CONTACT

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Public Viewer

- Open access to anyone
- Audience – general public, local community groups, private landowners
- “Assess Your Location” feature –Threat/Intensity
- “Map Themes” (basic level maps)

Assess Your Location (Public/Professional)

Threat and Fire Intensity



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

ASSESS YOUR LOCATION | MAP THEMES

Enter address or coordinates

ASSESS YOUR LOCATION

Pan the map to view the likelihood a location may be impacted by wildfire

HIGH THREAT | HIGH INTENSITY

34.0025° N - 111.4740° W

Wildfire Threat
Wildfire Threat is a measure of the likelihood of a fire starting and spreading to a location. Collectively, areas with High Wildfire Threat (High, Very High, Extreme Levels) are defined to support decision-making, represent the Highest threat and occupy 7.5% of the state. High Wildfire Threat is approximately 12 times greater than areas in Moderate Wildfire Threat and 53 times greater than areas in Low Wildfire Threat. For a cell that is defined as in urban or agriculture, the Wildfire Threat displayed is the average Wildfire Threat values for the area inside of a circle with a radius of 787 feet (eight 30 meter cells).

Fire Intensity
Flame length is directly related to Fire Intensity and is commonly used as a direct visual indication of Fire Intensity. This Fire Intensity Level has flame lengths ranging from 8 to 12 feet long. Trees with low branches can be expected to torch. Expect short-range spotting to be common with medium range spotting possible. Generally indirect attack is needed with the support of fire engines and aircraft together with dozers or tractor plows. It may be difficult for firefighters to work near structures unless adequate defensible space has been

1km
0.6mi

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Assess Your Location (Public/Professional) Threat and Fire Intensity



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

ASSESS YOUR LOCATION MAP THEMES

Enter address or coordinates

ASSESS YOUR LOCATION

Pan the map to view the likelihood a location may be impacted by wildfire

HIGH THREAT HIGH INTENSITY

Fire Intensity
Flame length is directly related to Fire Intensity and is commonly used as a direct visual indication of Fire Intensity. This Fire Intensity Level has flame lengths ranging from 8 to 12 feet long. Trees with low branches can be expected to torch. Expect short-range spotting to be common with medium range spotting possible. Generally indirect attack is needed with the support of fire engines and aircraft together with dozers or tractor plows. It may be difficult for firefighters to work near structures unless adequate defensible space has been created. Be advised that if salt cedar is present in your area, the actual fire behavior may be higher than this data shows. Seek guidance from your local Fire Planning Specialist. The Fire Intensity displayed is the average for the area inside of a circle with a radius of 787 feet (eight 30 meter cells).

Precautions and Preparation
There is high potential for harm or damage to life and property. Taking increased preparedness measures may be needed to better protect your home and property. This is an important consideration in a scenario where sufficient firefighting resources are not available to protect your home or property. Be alert to the potential occurrence of wildfire. Embers from a wildfire can travel

0.1mi 0.6mi

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Wildfire Risk



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

ASSESS YOUR LOCATION MAP THEMES Enter address or coordinates

LAYERS

- Wildfire
 - Wildfire Risk *i*
 - Wildfire Threat *i*
 - Values Impacted
 - Landscape Characteristics
 - Historical Fire Occurrence
 - Boundaries

BASEMAPS

- Light Gray Map *i*
- Aerial *i*
- Streets *i*
- Topographic *i*

REFERENCE

Low

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Map Themes (Public/Professional)

Ignitions & Fire Occurrence Layer



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

ASSESS YOUR LOCATION | **MAP THEMES** | Enter address or coordinates

- Landscape Characteristics
 - Surface Fuels
 - Vegetation
 - Wildland Development Areas (WUI)
- Historical Fire Occurrence
 - Fire Occurrence Density
 - Location Specific Ignitions
 - Ignitions & Fire Occurrence Density**
 - Boundaries
- Land Ownership or Management
- BASEMAPS**
 - Light Gray Map**
 - Aerial
 - Streets
 - Topographic
- REFERENCE**
 - County Boundaries
 - City Boundaries
 - Firewise Communities
 - Congressional Districts
 - Local Fire Services
 - Public Land Survey
 - Historic Fire Perimeters**
 - CWPP Areas

Map Labels: Miller Creek, Route Creek, Prescott, Creek, INDIAN 2002

Scale: 1mi, 2km

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Professional Viewer



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

HOME

ABOUT

SUPPORT

CONTACT

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APPLICATIONS

Public Viewer



Professional Viewer





Professional Viewer

- Login required
- Audience - government officials, hazard-mitigation planners, and wildland fire managers
- “Assess Your Location” feature (Threat/Intensity)
- “Map Themes” (additional layers/reference)
- “Areas Of Interest” feature (summary report)

Ignitions & Fire Occurrence Layer with Wildland Development Area Overlay



ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

ASSESS YOUR LOCATION | MAP THEMES | Enter address or coordinates

LAYERS

- Wildfire
 - Wildfire Risk
 - Wildfire Threat
 - Values Impacted
 - Aggregate Value Impacts
 - Wildland Development Area Impacts
 - Landscape Characteristics
 - Surface Fuels
 - Vegetation
 - Wildland Development Areas (WUI)
 - Historical Fire Occurrence
 - Fire Occurrence Density
 - Location Specific Ignitions
 - Ignitions & Fire Occurrence Density
 - Boundaries
 - Land Ownership or Management
- BASEMAPS**
 - Light Gray Map
 - Aerial
 - Streets
 - Topographic
- REFERENCE**
 - County Boundaries

Map controls: Wildland Development Area, Ignitions & Fire Occurrence Density, navigation tools.

Map labels: Prescott, Indian 2002.

Scale: 1mi, 2km.

Not in WDA

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Map Themes

Layer, Basemap and Reference Displays



LAYERS	
Wildfire	
Wildfire Risk	
Wildfire Threat	
Wildfire Effects	
Suppression Difficulty	
Values Impacted	
Aggregate Value Impacts	
Wildland Development Area Impacts	
Infrastructure Impacts	
Forest Assets Impacts	
Riparian Assets Impacts	
<input checked="" type="radio"/> Drinking Water Impacts	
Landscape Characteristics	
Surface Fuels	
Percent Slope	
Weather Stations	
Weather Influence Zones	
Vegetation	
Wildland Development Areas (WUI)	
Where People Live	
Infrastructure	
Forest Assets	
Forest Assets Response to Fire	

Wildfire Behavior	
Characteristic Rate of Spread	
Rate of Spread - High	
Characteristic Flame Length	
Flame Length - High	
Probability of Canopy Fire	
Fire Type - High	
Fire Type - Extreme	
Historical Fire Occurrence	
Fire Occurrence Density	
Location Specific Ignitions	
Ignitions & Fire Occurrence Density	
Boundaries	
Land Ownership or Management	
BASEMAPS	
<input checked="" type="radio"/> Light Gray Map	
Aerial	
Streets	
Topographic	

REFERENCE	
<input checked="" type="checkbox"/> County Boundaries	
City Boundaries	
<input checked="" type="checkbox"/> Firewise Communities	
Fire Stations	
Railroads	
Hospitals	
Schools	
Airports	
Congressional Districts	
HUC12 Watersheds	
Local Fire Services	
<input checked="" type="checkbox"/> Public Land Survey	
Historic Fire Perimeters	
CWPP Areas	

Professional Viewer- Area of Interest





ARIZONA STATE FORESTRY WILDFIRE RISK ASSESSMENT PORTAL

ASSESS YOUR LOCATION AREAS OF INTEREST MAP THEMES

ASSESS YOUR LOCATION

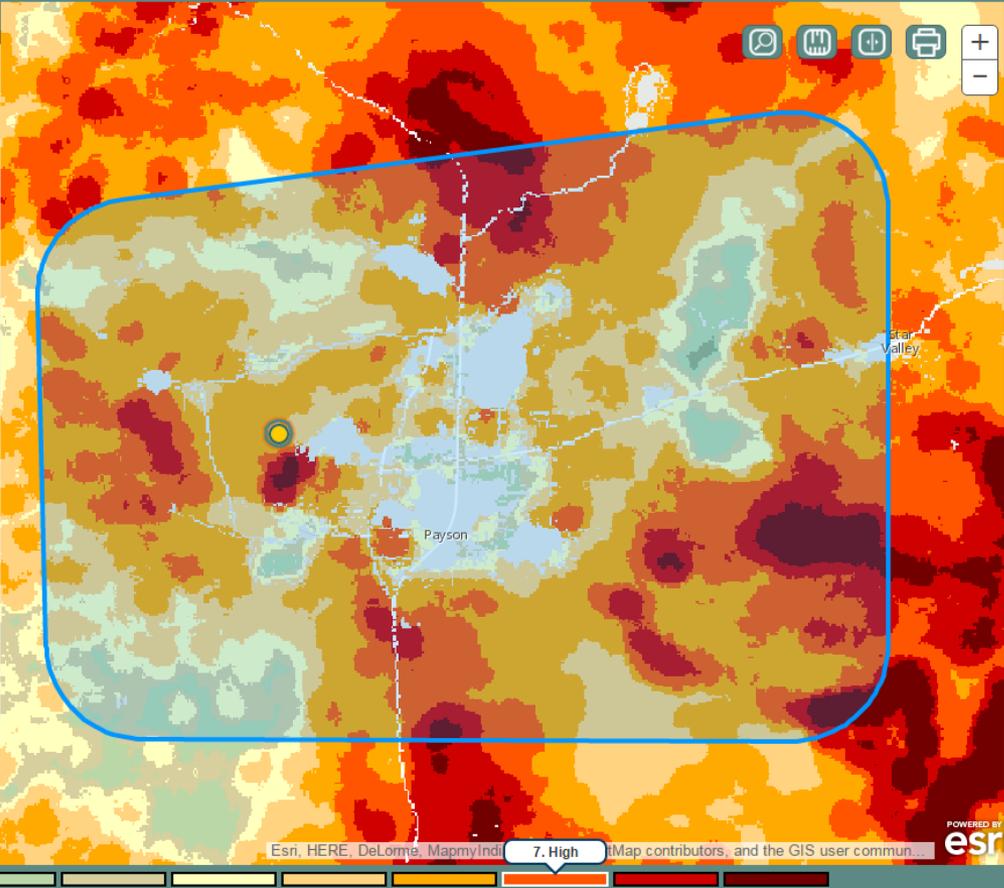
 Pan the map to view the likelihood a location may be impacted by wildfire

MODERATE THREAT **MODERATE INTENSITY**

34.2437° N 111.3492° W

Wildfire Threat
Wildfire Threat is a measure of the likelihood of a fire starting and spreading to a location. For a cell that is defined as in urban or agriculture, the Wildfire Threat displayed is the average Wildfire Threat values for the area inside of a circle with a radius of 878 feet (eight 30 meter cells). Collectively, areas with Moderate Wildfire Threat (Low - Moderate, Moderate, Moderate - High Levels) are defined to support decision-making, represent Moderate threat and occupy 22% of the state. Moderate Wildfire Threat is approximately five times greater than the areas in Low Wildfire Threat.

Fire Intensity
Flame length is directly related to Fire Intensity and is commonly used as a direct visual indication of Fire Intensity. The Fire Intensity displayed is the average for the area inside of a circle with a radius of 878 feet (eight 30 meter cells). This Fire Intensity Level has flame lengths ranging from 4 to 8 feet long. Expect short-range spotting. Firefighters will find these fires difficult to suppress. Generally direct attack with handline is not successful and indirect attack is needed with the support of fire engines and aircraft together with dozers or tractor



Payson

Grain Valley

2km
1mi

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Professional Viewer - Summary Report

ARIZONA WRAP
AREA OF INTEREST SUMMARY
REPORT



*Prescott
Basin 2*

Summary Report



Table of Contents

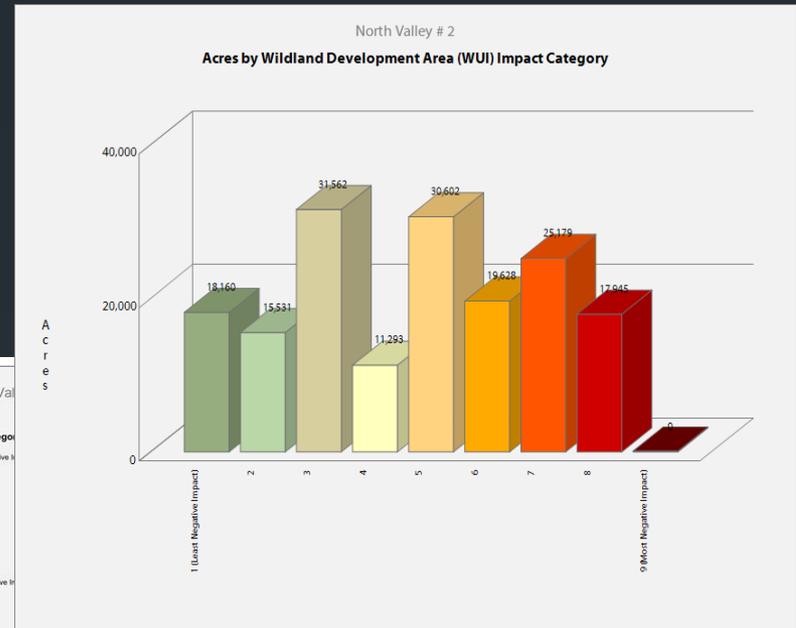
Disclaimer
Acknowledgement
Introduction
Wildland Development Areas (WUI)
Fire History Statistics
Wildland Development Area (WUI) Impacts
Wildfire Risk
Wildfire Threat
Aggregate Value Impacts
Suppression Difficulty
Fire Occurrence Density
Fire Behavior
Characteristic Rate of Spread
Characteristic Flame Length
Probability of Canopy Fire
Surface Fuels
Vegetation
Drinking Water Importance Areas
Drinking Water Impacts
Riparian Assets
Riparian Assets Impacts
Forest Assets
Forest Assets Response to Fire
Forest Assets Impacts
Infrastructure Assets
Infrastructure Asset Impacts
References

Professional Viewer - Summary Report

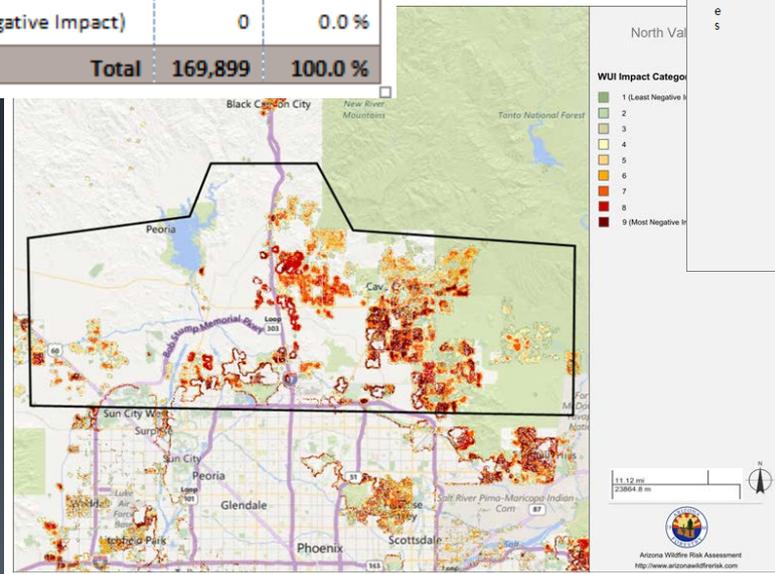


WDA Impact Category	Acres	Percent
1 (Least Negative Impact)	18,160	10.7 %
2	15,531	9.1 %
3	31,562	18.6 %
4	11,293	6.6 %
5	30,602	18.0 %
6	19,628	11.6 %
7	25,179	14.8 %
8	17,945	10.6 %
9 (Most Negative Impact)	0	0.0 %
Total	169,899	100.0 %

Table

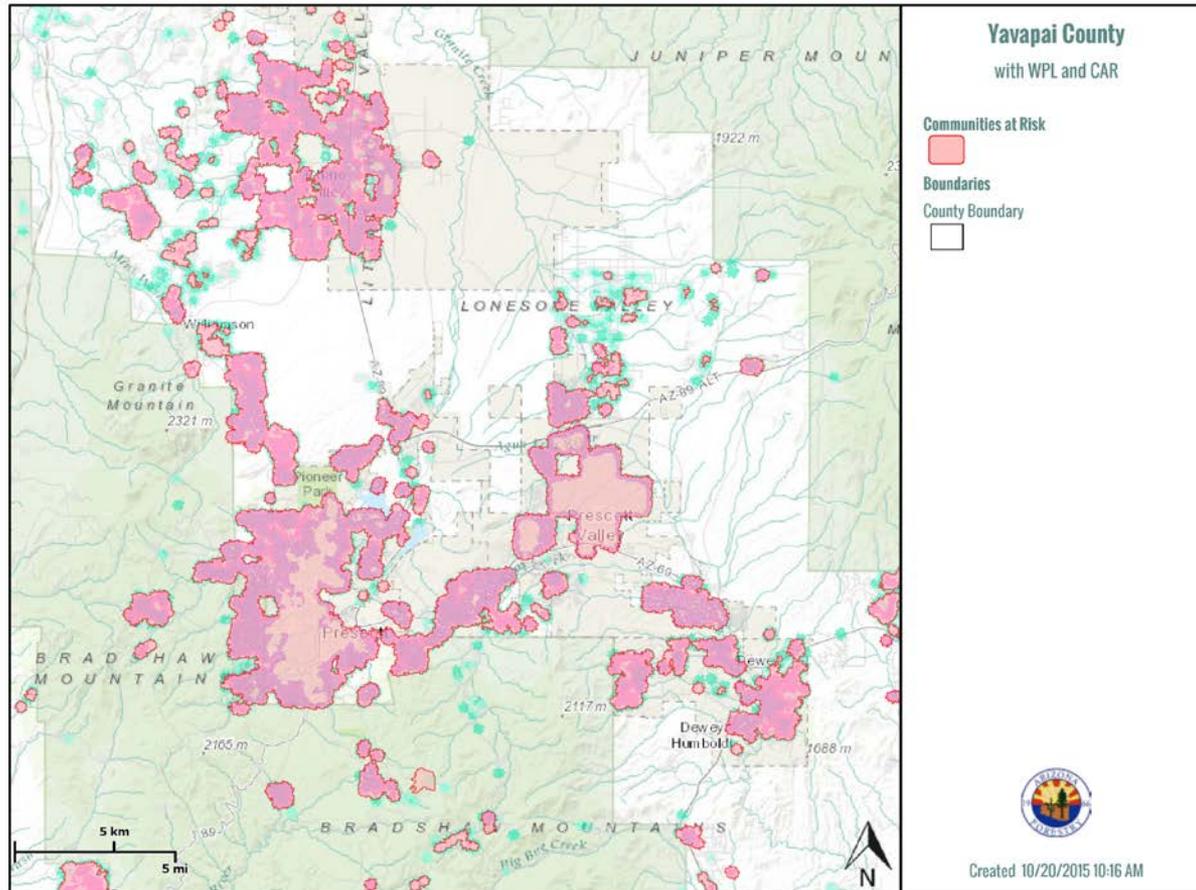


Graph



Map

Communities At Risk Editor (CARE)



AzWRAP



<https://arizonawildfirerisk.com/>